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# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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VOL. XXXV. LONDON, ONTARIO.

MAY 21, 1900.

WINNIPEG, MANITOBA.

No. 502

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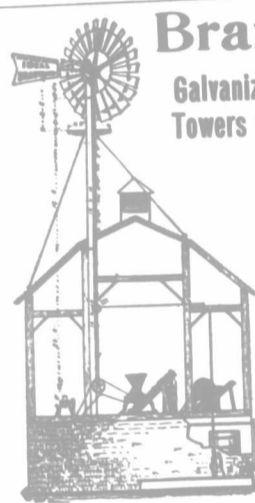
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# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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VOL. XXXV.

LONDON, ONT., AND WINNIPEG, MAN., MAY 21, 1900.

No. 502

## An Agricultural School for Manitoba.

It is now very generally acknowledged that this agricultural province should provide some facilities for the higher education of the sons (and daughters) of the farmer. Education along practical common-sense lines that will not tend away from the farm, but will be of assistance in making more successful farmers and more intelligent citizens. Many of our leading educationists, as well as many of our most progressive farmers, have, in these columns, expressed themselves in favor of such an institution, and both of our political parties are in favor of an agricultural school, the only obstacle in the way seemingly being a lack of funds. This difficulty could no doubt be overcome if the legislators were made to feel that the farming community are in real earnest in their demands for higher education. A large amount of the Provincial revenue now goes towards the maintenance of schools of higher education for almost every other profession, and rightly enough that it should, yet why should there be the distinction?

There is, we feel satisfied, a strong, earnest desire among the most intelligent farmers for a school of agriculture, although it is not as loudly expressed as some other demands of the public, and is therefore apt to pass unrecognized. In Canada, the only example we have to guide us is the Agricultural College at Guelph, and in this case the cost has been so enormous that it is little wonder that the legislators of a small and comparatively young province like Manitoba are staggered at the very thought of such a thing. But it may be fairly asked if a school of agriculture well suited to our present needs could not be established at a very small expense. We believe it could. It is not necessary, nor perhaps even desirable, that an extensive experimental farm be operated in connection with our agricultural school, as is the case at Guelph. This in itself would make a vast difference in the appropriation necessary. Neither would it be necessary to establish as extensive and complete a course as that of the Ontario College. Those who had the privilege of hearing Prof. Henry's address at the Live Stock Breeders' Conventions, last February, regarding the wonderful success of the Wisconsin Short Course, will readily concede that such a course would serve the purposes of Manitoba for a beginning, at least. What is wanted is an opportunity for farmers' sons and young men desirous of acquiring a fuller practical knowledge of the care and management of the soil, of the care and management of live stock, and something of farm horticulture. As we already have a Dairy School, this would be affiliated with the Agricultural School, and that course taken by those who so desired, the course to occupy three or four months during the winter, when time could well be spared from home duties.

Such a course might be started with, say, three instructors: one to take up agriculture, including the study of the soil, cultivation, plant life, crops, etc.; another to deal with live stock, care and management, including feeds and feeding, breeds and breeding, including judging; and a third, dairying. Wisconsin does not teach English in its Short Course, but it does seem as if a course of English, including something of what might be called a farmers' business course, would be popular and very helpful, for there are many farmers' sons about the age to take advantage of a winter short course whose early education was neglected owing to want of schools and pressure of work on the new farms during the pioneer years from 15 to 20 years ago, and for many years to come there will be an annual crop of just such young men from the newer settlements.

The farm itself might not be more than 100 acres, with good substantial buildings for the housing of such stock as would be required to demonstrate the lecture courses, and comparatively few would answer this purpose.

The school buildings would not at first require

to be very extensive, nor the equipment very elaborate, but could be added to as required. The farm itself could be used to demonstrate the practical features of the lecture courses, and at the same time be to a certain extent a model quarter or half section farm.

The location of the school is a matter of no particular interest to us, so long as a convenient central point on the main line of travel be selected, as certainly such an establishment would be a great attraction to visitors and intending settlers, and it should be equally available to all parts of this Province.

## Important Railway Concessions to Shippers of Pure-bred Stock.

In response to representations made by the Pure-bred Cattle Breeders' Associations and the Sheep and Swine Breeders' Association, the following concessions have been granted by the Canadian Pacific and the Manitoba North-western Railway Companies in the transportation of pure-bred stock in less than car lots between Western shipping points. The weight classification on bulls one year and over has been reduced 50%, and where two or more are shipped together, the same weight will be charged for as in the case of ordinary horned cattle. In addition to this, the regular 50% reduction off published tariff rates will remain in force on pure-bred stock. The Company also offer to refund half the passenger fare of men in search of pure-bred stock for their own use, upon the production of receipt for ticket purchased, together with the shipping bill showing that one or more animals were purchased and shipped. These concessions will, we think, meet with general appreciation, and should do much to facilitate the trade in pure-bred stock between local breeders, more especially the carrying of aged bulls, and such concessions in the carrying of pure-bred stock will, we feel confident, do more towards the upbuilding of the live-stock interests of the West by assisting the local breeders than any free distribution of sires by the railway companies.

The Dominion Express Company have also made a concession in favor of pure-bred stock shipped between all points where the distance is over 200 miles, the reduction being 20% off their merchandise rate. This reduction has also been obtained by the breeders' associations, and should be of very material assistance, particularly to the swine breeders of the West.

## For Good Roads.

As the country settles up, as the old cross country trails are plowed or fenced off, the necessity for some broad, general plan for government assistance or supervision of road-building becomes more and more apparent. Road-building by municipalities can at best be but a patchwork job suited to the needs of the municipality alone. Owing to the location or constitution of some municipalities, the main roads are more used by the residents of adjoining municipalities, that do not contribute a cent to the maintenance, than by its own ratepayers. Some settled municipalities have to undertake heavy expenditure for drainage and bridge building, which might largely be avoided by the construction of probably much less expensive drainage in an outlying or unsettled district.

What seems to be wanted is some system of government supervision, including surveys, the benefit of which would be available to any municipality, and the adoption of some plan of government assistance in building main thoroughfares that pass through one or more municipalities. Of course, there are municipalities that are so situated and so governed that they need no provincial assistance. There are, however, others so unfortunately located or so badly governed that they will become bankrupt in their efforts to build roads, and still never have good roads until this work is placed

under the supervision of some central guiding power. Is there not room in Manitoba for a Good Roads Commissioner?

## Stop the Drifting.

The long-continued dry weather and heavy winds of this spring have in some cases resulted in considerable damage to growing crops by drifting the soil; even heavy clay soils have been drifted badly where summer-fallowed or where the root fiber has all been worked out of the soil. The fact that soil drifts is conclusive evidence that it is lacking in root fiber or humus. This element in the soil also greatly assists in retaining moisture in light soils, because it has the property of taking up a large quantity of moisture, and does not give it off as readily as the other constituents of light soils. In heavy clays, humus serves to keep the soil particles from running together when wet and baking like bricks when dry, and also assists in making the soil warmer and more friable and more easily worked. Now, while the prairie soils of the West are mostly still rich in fertility, there are many thousands of acres of the heavy clay lands, and also of the lighter soils, that, from constant cultivation, cropping, and summer-fallowing, have had all the virgin root fiber worn out of them. These are the soils that blow away, that dry out quickest in a dry time, and (if heavy) remain cold and sour in a wet time (of course, there is soil, old bog bottoms, etc., with an excess of humus, but these are not troubling the western farmer). The remedy, as we have many times stated, is to manure or seed down to grass, but certain it is the humus supply must be restored if we are to continue farming profitably in this country.

## Agricultural Statistics of Manitoba.

The Provincial estimates contain the following items in the Agricultural Department that are of general interest. There is little difference between these estimates and those of the year previous. It will be noticed, however, that the items for agricultural societies and Farmers' Institutes are combined. This is in accordance with the (proposed) amendment to the Agricultural Societies Act, whereby the Farmers' Institutes are to be carried on as a branch of the work of the agricultural societies, for which they will receive a special grant on the conditions that they hold a certain number of meetings for the discussion of agricultural subjects irrespective of the annual show. As it is a fact that nearly all the Farmers' Institutes and agricultural societies are under the management of practically the same set of men, this change will save the duplicating of machinery, and should also assist in sustaining the interest in the agricultural societies throughout the year. A clause in the amended Act provides for the organization of Farmers' Institutes apart from the agricultural societies, and on this account there is no separate item in the estimates for Farmers' Institutes. Two hundred dollars is placed to the credit of the Horse Breeders' Association, placing this Association on the same footing as the other breeders' associations. There is also an item providing for an investigation of "swamp fever." This is certainly a worthy object, as this terribly malignant disease affects a large portion of the Province, causing every year the deaths of hundreds of horses, and there seems absolutely no remedy as yet discovered. The estimate for this purpose is small, as it would be worth thousands of dollars to the Province if some remedy could be discovered.

E. D. A. Societies and Farmers' Institutes	\$16,671 25
Diseases of animals	4,657 40
Agricultural statistics	1,530 20
Noxious weed inspection	2,000 00
Dairy School and dairy instruction	6,652 04
Dairy associations	200 00
Pure-bred Cattle Breeders' Association	200 00
Sheep and Swine Breeders' Association	200 00
Manitoba Horse Breeders' Association	200 00
Manitoba Poultry Association	350 00
Manitoba E. D. A. Society	300 00
Winnipeg Industrial Exhibition Association	4,000 00
Western Agriculture and Arts Association	2,000 00
Western agriculture special building fund	2,000 00
Horticultural Society	250 00
Investigation of Swamp Fever	200 00
Prairie fire sufferers (Dauphin)	1,000 00

## THE FARMER'S ADVOCATE

AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN  
THE DOMINION.

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8. ALWAYS GIVE THE NAME of the Post Office to which your paper is sent. Your name cannot be found on our books unless this is done.
9. THE DATE ON YOUR LABEL shows to what time your subscription is paid.
10. SUBSCRIBERS failing to receive their paper promptly and regularly will confer a favor by reporting the fact at once.
11. NO ANONYMOUS communications or enquiries will receive attention.
12. LETTERS intended for publication should be written on one side of the paper only.
13. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve the ADVOCATE, Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
14. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

Address—THE FARMER'S ADVOCATE, or  
THE WILLIAM WELD CO.,  
WINNIPEG, MANITOBA.

### Branding Canadian Bacon.

To the Editor FARMER'S ADVOCATE:

DEAR SIR,—In the FARMER'S ADVOCATE of May 5th we saw an editorial under the title of "Stealing Canada's Good Name," referring to a letter from Mr. D. C. Platt, Wentworth County, Ont.

There is no doubt about the gentleman's good intentions about having all Canadian bacon marked "Canadian," but if he looks at it from another point he will find it is not quite correct. Of course, the law in England requires the brand of the name of the country where produced when branded with English or Irish names; thus American bacon branded with Canadian names must also bear the U. S. brand; but if the Government should compel all pork-packers to brand all Canadian bacon "Canadian Produce" on each side it would be detrimental to the Canadian trade, because there is only about one-third really choice, prime Canadian, and the packers no doubt all take good care to have those sides branded with their trade-mark and sold as Canadian bacon; but lots of soft and fat bacon that is grown in Canada is sold in England as half brand or, in other words, without any brand on it and this surely is a benefit for Canadian reputation. We can hardly believe that any American bacon is branded Canadian; if so, the High Commissioner or any representative can only lay information against the dealer and he will be fined heavily and his name published. Similar cases in Danish butter occur daily, some retailers palm off butter mixtures for Danish butter, and even when they sell margarine or butter mixture without distinctly marking "Margarine" on the wrapper they are fined for not doing so. We believe that the high standard of the Canadian bacon is mainly due to the private packers in this country who have all tried to cure it in first-rate manner and have selected it strictly and only branded the very choicest of the bacon and shipped the remainder over as half brand.

THE CANADIAN PACKING CO.  
Per John H. George.

### Reflections.

While conversing with an "old" Ontario friend lately, and talking of old acquaintances, the remark was made that the children of many of our best-off acquaintances were now the poorest, while the children of the poorest were generally doing well. In thinking over the causes that have led to such a state of affairs, and going back all the years I can remember, I come to the conclusion that some of the greatest reasons for failure are: 1st. In so many cases children are not allowed to think, act, or spend any money for themselves. Many cases I have known of where children did not have 25 cents a year to spend until they were grown up, and then the novelty and the feeling of manliness in having money of their own to spend completely intoxicated them, and having never been taught to save or to count the cost or make a report of their expenditures, they are almost sure to squander money. The boy who is taught economy is best taught with a dollar or more in his pocket. He is stronger every time he has a fight against self-gratification; every time he resists the temptation to have something his good sense tells him he can well do without or he can't afford, he is stronger, and he has a higher pleasure of self-mastery than the spendthrift has who has not strength or will power enough to hang on to his last quarter. Another reason large families from Ontario are scattered over the Northwest and United States is on account of the unequal division of property. In many cases large brick or stone houses and expensive barns and outhouses, worth thousands, were placed on 100-acre farms, and at the death of the father everything was left to one child, as the real property could not be divided and it was an impossibility for the favored heir to pay even a few hundred dollars to each of the brothers and sisters, as fine homes generally necessitate large expenses, while they don't bring any interest on the principal. Another common cause of failure among Ontario farmers was building beyond their means. Many successful farmers spent years of toil, denying themselves many necessities in order to build a fine house, and when it was built the disappointment was great, because it could not be furnished without running in debt.

About 40 years ago one of the proverbs in my copy book was: "Improve rather than find fault by the errors of others." Now, that is just what we in Manitoba should try to do. The farm is a home and a business combined. I was pleased with Mr. Ring's article on "Homemaking" in the March 20th issue of the ADVOCATE, and I hope no intelligent farmer will overlook it. If such suggestions were carried out there would not be so many children leaving the farm, nor so many discontented farmers' wives. Many overburdened and discouraged women would take fresh courage if an effort was made by the "men folk" to help make home as nice as they could afford. Many farmers fail in making farming a success by their inattention in what they call small things, that mean so much to wife and children. He should arrange for comfort and happiness of the family, as well as make money. Why put off the enjoyment of life to some future time—that we are not certain will ever come? Good living doesn't mean expensive living, nor is good reading out of the reach of the poorest.

As farmers, we should try and have minds of our own and not simply be imitators of others of extravagant tastes. Neatness, cleanliness, knowledge and economy are to be desired far before finery and debt. Plain living and high thinking should be our aim. In our children we should try to cultivate a spirit of independence by giving them something of their own or some way of earning it. The earnings may be invested in something to start them on a farm of their own, or if girls, some useful belongings. The young people would then become self-reliant, and there will be an all-round benefit. It is not enough for the older people to be interested in Institutes or other farmers' organizations, but get the young interested, and the best way to get them interested is to give them something to do. Many children are better read than their fathers, and need only the chance to develop and cultivate their talents. It is a fact that men in all other branches of business can get together and work unitedly for their common interest better than farmers can. Farmers are more narrow-minded and more divided by party politics, and they do not keep posted on what is going on. How many know what their representatives in the Province or Dominion are doing for them?

Two things we should never be behind with—the times or *with our work*. Every school and every village must have its annual picnic (in June). The month passes, and many farmers are breaking or summer-fallowing when they ought to be haying, and cutting frost-bitten hay in the fall. Now, no person should deny the hard-working farmer a holiday now and again, but two and three a week in the best month of the year is carrying a good thing to the extreme.

"God is always on the side of the man who does his best."

God helps the man who tries to overcome difficulties honestly.

AMARYLLIS.

### We Lead.

There is no agricultural paper published in America the equal in amount of general information or a practical character with that of the FARMER'S ADVOCATE, published at London and Winnipeg, Manitoba.

### Raising Turkeys in Manitoba.

To the Editor FARMER'S ADVOCATE:

I have been watching the ADVOCATE this spring for something on turkey-raising. There has often been a good deal written on this subject, but mostly from Ontario writers, and seldom have I noticed anyone writing on raising turkeys in Manitoba. Now, I think there is quite a difference between raising them in Ontario and Manitoba. There has been a good deal said as to why there are not more turkeys raised in Manitoba, instead of importing them from Ontario. I have not had a very long experience, but I think we have more enemies to contend with here, the greatest of which is the prairie wolf.

We are told that after the young turkeys are a few weeks old, or as soon as they get the red on their heads, they will take care of themselves, and are no more bother. Now, I find that to have any success we must take an interest in our work and take good care of the little birds, and keep a watchful eye on them when they are older, or we will not have many for Thanksgiving or Xmas, to say nothing of market. I am often asked how I have been so successful with turkeys, and I thought that perhaps by giving my plan of working, it might be helpful to somebody else.

To begin with, we want good healthy stock. My turkeys seldom begin to lay before the middle of April. Young hens lay earlier than old ones, and generally more eggs. Have nice clean hay in a stable or outhouse, and they will not want to steal their nests for the first laying; but if you break up their nests, they will very often steal away when they lay the second time. I always gather the eggs as soon as possible after they are laid, and never let them get a speck of anything greasy on them, as they will not hatch if you do. Keep them in a cool place; set on end in a box of chop or grain. I have kept them that way for a long time without spoiling. If you are going to set them under hens—and I think hens are best—get as many set at one time as possible. Put from 9 to 11 under a hen, according to her size, because the more you have hatch out at once, the better. I notice that if there is even a few days difference in their age, the first ones hatched do the best, as they are stronger. In setting hens, keep them separate from the layers, so they will not be disturbed. Always leave feed and water where they can get at it when they wish. Set in boxes—soap boxes do nicely—put a few inches of fresh earth in the bottom of each box, setting the box on the floor, and then put some clean hay or chaff in, then put in the eggs. Give the hens a good dusting with Dalmation Insect Powder, using a blower. When the turkeys are hatched, leave them in the nest about 21 hours, and give them a dusting with the insect powder while still in the nest. Hard-boiled eggs with chopped onion tops and bread crumbs or bread soaked in milk and squeezed out dry make a good feed for a few days. Buttermilk curds with bread crumbs makes excellent feed. When they are about a week old, I feed a little shorts mixed in, gradually adding to it boiled potatoes, fine oat chop, or whatever is handy, never changing the feed too suddenly. Always keep fresh water and grit, or a heap of sand, for them and plenty of dry ashes to dust in. Examine often for vermin, for if they get the start, your turkeys will soon droop and die. Look between the long feathers on top of the wings, and if they are bad, mix coal oil with lard and put on them; rub some also on the mother, and they will soon disappear. Keep the mothers in a well-covered coop, and let the little ones run, and when it comes a shower they will run to shelter. You must take care of the little birds if you expect to have large ones in the fall, and if you put your heart in the work, you will enjoy it. After a while, and if this advice has been any benefit, I will give some more of my experience on subsequent treatment.

"A MANITOBA FARMER'S WIFE."

### The Cottonwood Not Desirable for Prairie Planting.

The cottonwood has been largely used in the Western States for timber and fuel, as a shade tree, and for wind-breaks. For all these purposes it is a very inferior tree, but on account of its abundance, rapid growth and hardiness, it has almost necessarily been largely used in the pioneer work of settlement. As a timber tree, it is inferior, on account of its timber warping badly in drying and being extremely difficult to season. As a tree for shade and wind-breaks, it is not so valuable as the green ash, white willow, white elm, or box elder. On the dry prairie it is subject to leaf rust, is short-lived, and fails to make a shade dense enough to keep the grass out of groves. The pistillate form is objectionable, on account of the cottony floats with which it fills the air when shedding its seed. It has, however, done good service in our Western States, and may continue to be of service in first plantings, but our people had better plant longer-lived and more desirable trees mixed in with it to replace it when it fails. Occasionally, however, the cottonwood can be used to advantage where a quick tree effect is wanted, for where it has plenty of water it will make a great, stately tree in a very short time. If one wishes to plant cottonwood and avoid the "cotton," which is so objectionable, cuttings from the staminate tree only should be used, as this form produces no cotton. From Prof. S. B. Gove's "Forestry in Minnesota."

Government Aid to Agricultural Societies in the Territories.

The Territorial Department of Agriculture recently sent out to all agricultural societies a circular letter containing two important suggestions. One was by way of assisting local societies to secure the services of competent live stock judges from points outside their own localities, the Department offering to supply free of charge experts in the different lines, provided several agricultural societies arrange the dates of their fairs so that the one outside judge could attend a number of them in circuit. The proposition seems feasible enough, provided, of course, that politics do not interfere with the fitness of the judges, and also that the agricultural societies will get together and arrange the circuit of dates. The latter difficulty will doubtless be found hardest to overcome, as local circumstances and conditions and the amount of correspondence necessitated makes satisfactory arrangements difficult of accomplishment. If the fixing of dates could devolve upon any one official, then it might easily be arranged, and this might be stipulated as a condition to receiving Government grants. The plan in vogue at the Winnipeg Industrial and large eastern fairs, of the Live Stock Breeders' Associations submitting select lists of expert judges, from which the exhibition associations make their appointments, works out very satisfactorily.

Certainly the object—securing competent, responsible single judges—is a most commendable one, and worth striving for.

As we have again and again pointed out, the stock judging at the fairs can be made a great educational feature. Even at our large fairs, comparatively little is yet made of this department, and at most local shows it is gotten through with by the "triangular committee" as an investigation that should be carried on behind closed doors. The public are expected to look at the red ticket, and not at the qualities in the animal which enables it to bear the first premium.

If the judging were arranged for certain hours, and advertised to the same extent as the speed events or platform attractions, properly constructed rings, with facilities for the public to intelligently view the animals while on parade before the judge, and each beast properly lined up and "marched past" in the order of merit, as decided by the judge, there seems no good reason why the judging ring should not become at least as popular as the Aunt Sallies and cane-ringing fakirs. Could short addresses by the judge on the types of the different breeds of animals be arranged for, as a fitting finish to his work in the ring, the benefits and interest would be still greater.

The other feature referred to in the above-mentioned circular is a plea to the agricultural societies to take up Farmers' Institute work. There are in the Territories no Farmers' Institutes, but the Agricultural Societies Act makes provision for the holding of meetings for the discussion of subjects pertaining to agriculture, and the Department offers to supply lecturers wherever a number of societies can be induced to take the initiative in this work. The Department could arrange one or more series of meetings during the year, and then the societies might well hold one or two other meetings, utilizing local speakers or such as could be got without much expense. The concentration of interests in having the agricultural society take up the work of the Farmers' Institute should prove an advantage. It would save duplicating machinery, and it is generally the case in Manitoba that the men interested in the one society are also the leaders in the other, where the two organizations are maintained, and as these are days of concentration and specialization in every branch of life, why not in farmers' organizations, if that concentrated effort can be made more effective for good than old methods. The agricultural societies will be benefited by the broadening of the field of their influence and in taking up Institute work, the interest in the work of the society will be maintained throughout the year, and not last for the one or two days of the show only.

Dates of Summer Fairs.

Table listing dates of summer fairs for various locations: Carman (July), Portage la Prairie (July), Neepawa (July 17th), Wawanesa (July 19th and 20th), Virden (July 23rd to 28th), Winnipeg Industrial (July 31st to Aug. 3rd), Brandon (Aug. 7th and 8th), Moosomin (Aug. 7th and 8th), Souris (Aug. 7th and 8th), Regina (Aug. 10th).

To Sow Brome Seed.

Prof. Shepperd, of the North Dakota Experiment Station, writing on Brome grass, says: "The seed can be put in with an ordinary grain drill by using a 'shaker.' A 'shaker' consists of a strip of board an inch by three inches in extent, with spikes driven through it to match the drill cups, and with an upright handle in the middle of the upper side. Agitating the seed with this appliance will cause it to feed through the drills.

Various Forage Crops for Summer Pasture.

The uncertainty of grass pastures in the dry summer months during the last few years has led many farmers to resort to a system of partial or complete soiling of stock from the time pastures begin to fail till the fields again provide ample support for the stock. Probably the most satisfactory method of soiling is found in the use of the summer silo, as the feed is then convenient and ready for use with little labor. With some classes of stock, however, and where satisfactory help is difficult to secure, soiling is more or less impracticable. In view of this condition of affairs we have given some attention to the adaptability of certain crops that may be grown on the ordinary stock farm to be used as pasture during seasons when grass fields present a browned and bare appearance.

FOR DAIRY COWS.

Probably the most extensive investigation of the value of annual forage plants for summer pasture for cows that has been conducted on the continent was carried out by Profs. T. L. Lyon and A. L. Haecker at the Nebraska Experiment Station in the summer of 1898. The objects were to throw light on the following points: 1st, the possibilities of preventing a decrease in the milk flow of cows during the dry period of summer by the use of annual forage plants; 2nd, whether permanent pasture can be in part or wholly substituted by annual forage plants; and, 3rd, the relative values of the most promising of these crops as feed and butter producers.

In the experiment, plots of land one-fifth of an acre in size were sown to each of the following crops: Fall rye, oats and peas, hairy vetch, Indian corn, millet, sorghum, white Kafir corn; yellow maize, soy beans and cow peas. When the crops reached a suitable stage for pasture, ten cows of the dairy herd were turned in, one in each plot, and kept there until the crop was eaten down. The cows were weighed before and after the experiment, and the milk was weighed for each day. Each cow was pastured on alfalfa for at least one month before being placed on the test crop (period I.) and for at least one month afterwards (period II.); the time she was in the test plot was known as period III.

The following table shows the results obtained in the experiment:

Table showing experimental results for various crops: Rye, Oats and Peas, Hairy Vetch, Indian Corn, Millet, Sorghum, White Kafir Corn, Yellow Mello Maize, Soy Beans, Cow Peas. Columns include Name of cow pastured, Began pasturing, Finished pasturing, Number of days pastured, Weight of green forage per acre, Gain or loss of live wt., and Av. daily milk production.

Surplus sign indicates a gain in weight. The minus sign a loss in weight.

The Oats and Peas were sown at the rate of two bushel of each per acre and harrowed in on April 15th, and the cow turned in on June 13th. She pastured here 22 days. A duplicate plot yielded at the rate of 8.67 tons of green crop per acre.

The Rye was sown in the fall at the rate of one

bushel per acre, producing rather a poor stand, and therefore did not give a fair test. Experiments conducted at that Station in 1897 indicated that rye produced a very abundant pasture, which places it in the lead of all the crops tested for early spring pasture.

Indian Corn was sown in rows six inches apart, at the rate of two bushels per acre, on May 20th. On June 20th the cow was put in, and by July 13th she had the crop well eaten down. A duplicate plot yielded at the rate of 16.77 tons of green forage per acre.

Millet.—The common variety was sown on June 2nd, in rows six inches apart, or at the rate of one and one-half bushels per acre. On July 15th the cow was turned in, where she remained till August 4th. The crop was closely eaten down. A duplicate plot of forage yielded at the rate of 11.60 tons per acre.

Sorghum.—Early Amber variety was drilled in on June 1st, in rows six inches apart, at the rate of two bushels of seed per acre. The cow was put in on July 13th, when the crop was about two feet high. She remained till August 14th, when the crop was fairly closely eaten. A duplicate plot cut August 17th yielded at the rate of 18.67 tons per acre of green forage.

Kafir Corn.—The White variety was drilled in on June 1st, in rows six inches apart, at the rate of two bushels per acre. The cow was turned in July 13th, when the crop was two feet high. She had the crop well eaten down on August 4th. A duplicate plot cut on August 17th, just before heading, yielded at the rate of 19.20 tons of forage per acre.

Yellow Mello Maize was sown in rows six inches apart, at the rate of two bushels of seed per acre, on June 2nd. On July 13th the plants were two feet high, when the cow was turned in. She grazed till August 6th. A duplicate plot yielded, on August 6th, at the rate of 15.12 tons of forage per acre.

Cow Peas and Soy Beans did not produce a sufficiently full crop to afford a fair test.

Of all the forage crops tested, sorghum furnished by far the greatest amount of pasture. For medium early pasture, oats and peas produced the most feed.

Regina Stallion Show.

The Spring Stallion Show, under direction of the Agricultural Society, was held at Regina on May 3rd. A large number of farmers and others interested in horse-breeding attended, and at 2.30 p.m. an encouraging crowd of people were at the Market Square to discuss the merits of the different animals as they entered the showing, and to watch the awards. The prizes were placed by Sergeant Matthews, V. S., of the Northwest Mounted Police. The heavy draft stallions were the first class judged, and six stallions, all in good fit for this season of the year, were brought into the ring: Glenfarg (8658), a large brown horse with white stripe on face and white hind feet, sired by Prince of the Glen (5273), dam Fanny of Pithcorthie (8310), bred by James Drummond, Jun., Pitcorthie, Dunfermline, a strong, nicely-turned horse and a fair mover, was placed first. MacBean (imp.) [807] (6630), sire Macgregor, dam Darling of Twynholm, imported by Graham Bros., Claremont, Ont., a nice brown with white face and four white legs, a heavy, powerfully-muscled horse, and carrying himself well, took second place. This horse is owned by Mr. John Harvey. The third prize went to John Trayner's Gordon [2268], Am. 8495, a stylish mover, but lighter in weight. Brown Bros. also showed a good stallion in this class purchased from Messrs. D. & O. Sorby, Guelph, Ont. The next lot called out were general purpose stallions, and seven horses competed in this class. Duke May, Jr., a sorrel, of Suffolk Punch breeding, exhibited by Thos. Brooks, of Fairville, was awarded first place. He won the same prize at last spring's show. Second went to Sandy McDuff, a Clyde-bred stallion exhibited by D. H. McDonald; third to an active-moving roadster in Tony Wilkes, shown by Mr. E. Forester. John Forester's Madward, a neatly-put-together Standard-bred stallion and a stylish mover, was the only competitor in the Standard-bred class.

Mr. Wm. Trant, the energetic secretary of the Regina Agricultural Association, and the other officers, are doing good work for the district in working up the Spring Stallion Show, as it affords to those having mares to breed a good opportunity to select the most suitable sire to breed to.

In offering prizes for scrub stallions, however, the management have fallen into a grievous error. We believe that any agricultural society that is weak enough to offer prizes for non-registered general purpose stallions should be debarred from receiving any Government grants. The use of these non-descripts, no matter how showy or by whom owned, results in the cheap horse that never will fetch enough to pay his owner a profit, and yet just because their service is cheap they get a large share of patronage, to the loss of the foal owner himself, as well as to the whole community, by making the business unprofitable to really high-class horses, whose services would be a lasting benefit to the country.

Nothing curses the horse-breeding industry of the West so much as does the use of just such un-registered nothing-at-alls as the Regina Stallion Show opens its lists to when they provide a class for "General Purpose Stallions," without requiring registration in some recognized stud book.

### Brandon Experimental Farm Notes.

The unusually early and fine spring has permitted work being well done, and what is very unusual in this country, we have had some leisure between wheat and oat seeding. Although some varieties of grain have been discarded as inferior, others have been added, and the number of plots is quite numerous. Wheat on this farm at this date, May 1, is all up and looking well. Winds have been somewhat severe, but so far no damage is noticeable. Summer-fallows are usually loose this spring, owing no doubt to the absence of snow to pack them. For this reason the soil drifts very freely. Care was taken, however, to sow very deep this year, so that no injury is anticipated from this cause.

Over fifty varieties of peas have already been sown, and some of them are appearing above ground. This cereal is always sown on the stiffest soil obtainable, and large crops of excellent grain is nearly always obtained.

Oat seeding commenced to-day on the farm. As spring frosts have been known to injure this grain when sown too early in former years, it was not thought advisable to commence seeding until April had past.

Brome grass is looking well, both new and old. On all parts of the farm it is at this date from 6 to 9 inches high. There was good pasturage on this grass on the 15th of April, when scarcely a bite could be obtained from native grasses. Several experiments are being carried on with grasses, such as heavy manuring on the surface during the winter to act as a mulch. Mixtures of Brome and native rye are also being tried for the purpose of making a more easily cured hay than Brome alone.

Red and white clover was severely injured by last winter's frosts, but alfalfa has come through without the least injury. This clover is most promising for this climate.

#### FREE DISTRIBUTION.

As the Central Experimental Farm at Ottawa undertakes the distribution of grain in three-pound packages throughout the Dominion, very little is sent in this shape from the Brandon farm. A considerable quantity of grain is, however, sent out in from 2 to 5 bushel lots. This distribution is confined entirely to varieties that are found to succeed best on the Brandon farm. This farm has been noted for its superior varieties of rhubarb, over thirty kinds being under test. We find a great scarcity of this useful vegetable throughout the Province, and for that reason it was thought advisable to make a general distribution of roots and seeds of the three best varieties, namely, Strawberry, Victoria, and Tottle's Improved. Although a very large number of roots and a quantity of seed was prepared, the demand so far exceeded the supply that it was impossible to supply a large number of the later applicants. A few packages of hardy perennial flowers of such varieties as ripened their seed last fall were distributed. Owing to the very large distribution of trees during the past two years, the stock has been greatly reduced on this farm, and for that reason the number sent out this year was not as large as usual. Twenty thousand trees and shrubs have already been sent out, consisting of such varieties as are not generally grown by nurserymen in the Province.

S. A. BEDFORD, Superintendent.

### Cavalry Remounts.

In the Territorial Legislature, a resolution was passed advocating the establishment of remount stations in the Territories. In moving the resolution, the Commissioner of Agriculture referred to the almost unlimited demand there would now be for horses for cavalry remounts and artillery purposes in the British army, pointing out the advantages a permanent horse market would be to the horse-breeding interests of the Territories, and also alluded to the fitness of the climate and conditions of the country for raising horses of the very best quality for the above purposes. The Commissioner explained that a remount station would simply be a depot for selecting and breaking horses. The Imperial Army authorities did not require the horses thoroughly broken; that could better be done by their own officers; all that was wanted was to have them halter broken and broken to the saddle. He thought the Dominion Government should take the matter up and bear the expense.

Resolutions regarding this same question were passed at the Stock-growers' meeting held at Medicine Hat recently, and also at the annual meeting of the Manitoba Horse Breeders' Association. The proposition certainly seems an excellent one, and if the Imperial authorities could be induced to send out a lot of mares for breeding purposes, it would be an additional advantage in stimulating the movement. Mares that had been unfitted by accident or wounds from further active service might answer, a few of them placed at different points, and with them a Thoroughbred stallion of the type desired for crossing in order to obtain the class of horse required, and then the service of these stallions would be available by the settlers, only such mares being allowed to go to the stallions as would likely cross satisfactorily with them.

Mrs. Hodless, who was chiefly instrumental in establishing the Normal Training School for teachers in domestic science and art, in Hamilton, Ont., has received a check for \$2,000 from Lord Strathcona as a practical evidence of his sympathy with the undertaking. His Lordship has written a letter highly approving of the school.

### The Construction of a Concrete Silo.

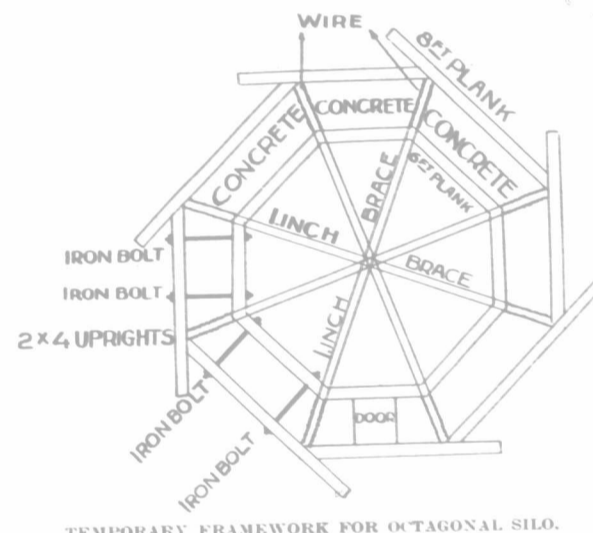
Take for example an octagon one, 16 feet in diameter, inside measurement, and 25 feet high, walls 16 inches thick at bottom and 10 inches at top, and I shall endeavor to give the process of making the concrete, the form of building, its cost, and the amount of silage it will contain.

In starting to build a concrete silo, it is necessary to excavate below frost, which should be 2 feet deep and one foot wider than the outside diameter of silo, so as to allow for footing course. By excavating all the ground out of the interior of silo, the floor can be put down to the bottom of footing, which will save building the walls so high.

#### MIXING THE CONCRETE.

In making concrete, lay down some straight-edge boards on the ground, and drive stakes on each side to keep them from spreading. This platform should be 12 feet square, with no sides to it. Now make a box without any bottom—just two feet square, inside measure, and 8 inches deep, which will hold just two paper sacks of cement. Fill this with gravel as often as you wish your concrete gauged for walls; it is usually 5 of gravel to 1 of cement. After the gravel is measured, spread the cement on top and shovel over twice dry. By letting every shovelful drop in the same spot the pile will form a cone shape, and the concrete will mix by rolling down the sides of the pile. After the concrete is mixed dry, level it off about shovel deep and make a hole in center, and pour in about two pails of water, and work the concrete to center, and to finish wetting it if a rose sprinkler is used it will distribute the water more evenly. Shovel this over twice, the same as it was done when mixed dry, and it is ready for use. *The concrete should not be wetter than to resemble moist earth. By taking it up in the hand it will pack, but not leave any moisture on the hand.*

After the concrete is prepared, spread about two inches of it on the ground; then place in stone and hammer them down well, and fill in between with



concrete until the height of footing is attained, which should be 10 inches or 1 foot. After the footing is put in, the form for building the walls should be put up. I have used uprights and wedges, but would prefer bolts to hold the plank to their place. The drawing I send will show this.

#### THE TEMPORARY FRAME.

Take 8 pieces, 2 by 4 in. by 14 ft. long, and stand them on end for the inside angles, and by nailing 1 by 6 in. by 16 ft. boards on top of these 2 by 4 in. pieces and letting them cross one another in center of silo and nailing them together, it will keep the uprights the right distance apart. By taking a 2 by 4 in. scantling and standing it up in center of silo under these boards, it will keep them from sagging. By taking a small strip and nailing it from top to top of these uprights it will keep them the same distance apart, and a few braces nailed crossways will keep this form solid and plumb. Now, take 8 more pieces, 2 by 4 in. by 14 ft. long, and stand them on end (according to plan) for the outside corners, and 16 in. at bottom and 10 in. at top from inside uprights, wire these together at bottom and nail strips on them every 4 or 5 feet high to keep them to their place. When these strips are in the way of raising the plank, take them off and put a wire in their place and build it into the wall so that the 2 by 4 in. scantling cannot spread. This form is stationary and is not moved until the height is reached. By building a wire through the wall, about two feet from the top of wall, the uprights can be held to their place at the bottom when raised the second time by twisting these wires tight around them.

In putting in the plank first saw notches in the bottom edge, 1 1/2 in. deep, to allow room for 2-in. bolts; then place the inside plank on edge between the upright and flush with the inside of it. The outside plank should butt against the 2 by 4 at one end and pass by the 2 by 4 at the other. This saves the sawing of the outside plank every time it is raised, as the batter is on the outside of silo. Put in the bolts in these notches and tighten the nuts and nail strips across the top of plank to keep them from spreading.

#### BUILDING THE WALL.

Now put in about 2 inches of concrete, then add the stone the same as in the footing and ram the concrete gently but firmly around them. Never let the stone come nearer than 1 1/2 inches from plank and from each other. When between these planks is filled with concrete, take off the top strips, loosen the nuts and lift the plank off, draw out the bolts and place them on top of wall, and place the plank on the same as before, and repeat until wall is finished. As the wall is built it becomes narrower. By taking short bits of 2 by 4 and boring holes in them they can be used for washers on bolts.

#### THE DOORS.

In putting in the doors they should be on top of each other and 1 foot or 16 inches apart, and between every door put in anchors made out of 7 or 8 strands of common fence wire twisted together, and put it all around the silo in center of wall; this will help keep the walls from spreading. After the walls are built they should be plastered on inside, and not more than 1/2 of an inch thick and the floor 2 inches thick.

A silo as just described, built with Battle's Thorold cement, would require 60 barrels cement, 10 yards stone and 40 yards gravel, 45 days' labor for one man or 9 days' for 5 men, and will hold about 96 tons of corn ensilage.

Welland Co., Ont.

NORVAL B. HAGAR.

### The Weaning of Pigs.

A common practice has been to allow the pigs to suck until they are six weeks old, and then they are suddenly weaned, and one or two pigs are left to keep the sow's udder from inflammation. That course has a tendency to stunt the pigs taken away; and when a pig is once stunted in its growth it hardly ever recovers what it lost. Pigs should be left to suck not less than eight weeks. They should have learned to eat with their mother. By throwing a handful on a clean place on the floor, when the pigs are three weeks old, they will begin to pick it up.

Then there should be a low and shallow trough in a part of the pen partitioned off for them, from which they can obtain warmed skim milk mixed with a little ground grain or shorts. If the young pigs can be turned out with their mother on a clover field before they are weaned, they will learn to eat it readily. They should be given a chance to take plenty of exercise even before they go out to clover. From the time they are weaned, a moderate supply of skim milk, buttermilk and green clover or similar feed will promote the growth of muscle, which becomes lean flesh.

Want of exercise and want of flesh-producing food during that period of their growth will prevent any breed of hogs from developing the fleshy qualities which are wanted in the market for bacon and hams. It is improbable that any kind of feed during the fattening of animals can result in producing a large proportion of lean flesh unless the animals are well grown during the two months which follow the time they are weaned. A pig should grow from the time it is born until it goes to the market for killing. Every day that it stands still lessens the profit which its owner might make out of it.

It will be found a profitable practice to have a small clover field for a pig pasture. If clover be not available, a fair pasture may be made of a small field of winter rye, or from a mixture of spring rye, oats and peas. The pigs should be fed, morning and evening, a small quantity of grain and about one gallon of skim milk or buttermilk to every three pigs per day. As a rule, under those conditions, it does not pay to feed a larger quantity of milk. If they have free access to a mixture of charcoal and salt they will not root the ground very much. If ringing is necessary, it should be done on each side of the nose. The castration should be done when three weeks old.

Elgin Co., Ont.

CLAUDE BLAKE.

### Model Farm Horse, and How to Breed Him.

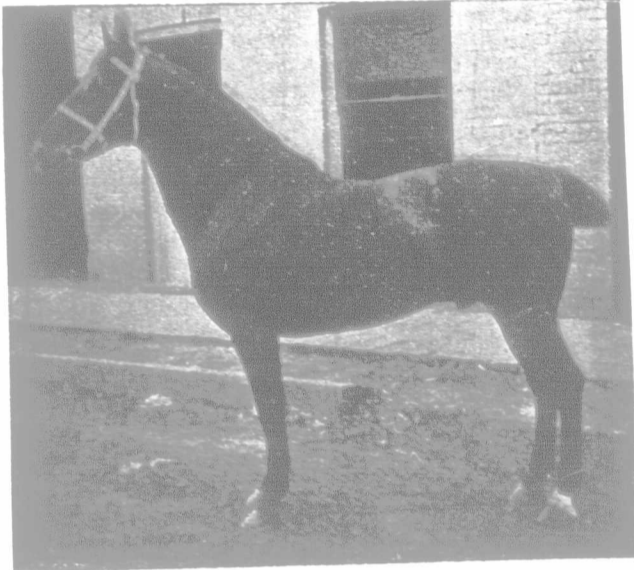
It being a stormy day, I thought to accept the invitation of "A. S." in a recent issue, and have a word on the above subject. Mr. "A. S." favors a clean-legged horse, and thinks his opinion runs contrary to many. There is surely no man with any judgment but would prefer a clean-legged, flat-boned horse to one of the opposite description. I really think the Clydesdale—straight-legged, clean-boned, and with good action—are what we want; such horses as I have seen in the Old Country that can beat many of the light horses in trotting. But the difficulty is that good ones of this sort cost more in pounds than we pay in dollars for our horses. I have ten horses in my barn, one a pure Clydesdale weighing about 15 cwt., which has the best action of the lot, and they are all good goers. A great mistake is made by many farmers in breeding mares that are unfit for work—it does not matter whether it is ringbone, sidebone, spavin, or what not, and in this way a most undesirable class of horses is perpetuated. Undoubtedly the feet and legs are the most important part of the horse, for, with good feet and legs, even although the body is a little plain, you have a good useful beast; but a model body with poor feet and legs, and you have what I call a good-looking "nothing." I have been over 50 years among farm stock, and have not seen any degeneration in the Clydesdale; so I think Mr. "A. S." might try again.

JAS. M. Pipestone.

### Our Scottish Letter.

THE SPRING SHOWS.

Since I last wrote, the chief business here has been shows, of which, on a large scale, we have had three, namely, at Kilmarnock, Glasgow, and Ayr, respectively. All three were held in grounds recently acquired and specially laid out for the purpose, and all three have been attended with a large measure of success. The Ayr Show is the most distinctly agricultural fixture of the kind which we have in the west country. It depends on agriculture pure and simple, and favored with fine weather this week, it drew on the two days £995 of gate money. Glasgow had a three days' event in its new showground at Scotstown, to the west of the city, the third day being devoted to a military tournament, and its drawings



**HACKNEY STALLION, SQUIRE RICKELL.**  
First prize and sweepstakes at Canadian Horse Show.  
OWNED BY R. BEITH, M. P., BOWMANVILLE, ONT.

for the three were £993, nearly one-half of the total having been drawn on the third day (Saturday), which was given over to sports and the tournament, as mentioned. Kilmarnock was not so fortunate in respect of weather, the days being bitterly cold, but there was a good attendance on the Saturday afternoon, which was again given over to horse-leaping and various kinds of quasi-sports. I do not know how you run shows in Canada, but I have an idea that Ayr stands unrivalled as a purely agricultural event. One great point in its favor is that its show has been held on the same date, the Tuesday preceding the last Wednesday, and the last Wednesday of April, for something like fifty years, and there has grown up around this date a vast number of local holidays in the towns and villages of Ayrshire, while the Wednesday is also a general country holiday in the surrounding neighborhood. Canadian visitors anxious to see a genuine country gathering could not do better than visit Ayr Show. It is an enjoyable function, and this year the leading features of the event were the Ayrshire cattle, Blackface sheep, Clydesdale horses and Driving horses. Glasgow maintains its pre-eminence as the best all-round show of Clydesdales, and Kilmarnock makes a good second in that respect, while this year it had the best show of pedigree Hackneys. The driving classes at all shows have this year been unusually good.

Ayrshires still hold their place as first favorites amongst cattle in the west and south-west of Scotland. The highest honor in the breed is the leadership of the Ayr Derby for three-year-old heifers. The animals are entered for this event when calves, and it is always a sign of good judgment when those thus selected take a good place in the Derby. It is an illustration of the sound judgment prevailing amongst breeders of Ayrshires that very seldom does a three-year-old heifer appear which is able to beat the Derby winner. Similar competitions are held at Castle Douglas, Kilmarnock, and Glasgow, and also at nearly all the county and parish shows in the West. This year the winner of the Ayr Derby comes from the extreme south of Scotland, from the famous Greta, where in other days runaway couples from England were wont to be joined in matrimony by an accommodating blacksmith, and his performance of the ceremony held good. The nominators of the Derby winner, "Senorita," were her breeders, Messrs. A. & W. Kerr, Old Graitney, Greta. The senior member of this firm, Mr. Abram Kerr, was formerly tenant of Castlehill, Durrisdair, which he left in 1893. He had a splendid outgoing sale, the quality of his Ayrshires being first-class. His stock bull, Peter of Whitehill, was retained and hired from season to season until Mr. Kerr found another farm, which he very soon did, and assuming his son William as partner, they have been gradually building up a good herd once more. "Senorita of Old Graitney" is a capital example of an Ayrshire dairy cow. She has a good vessel and first-rate teats, is a well-bodied cow, and carries herself well. Possibly ultra-critics might like her vessel to be carried more evenly forward, but for practical purposes she is an ideal

dairy cow, and was a popular winner. She also secured the female championship of the show, carrying all before her. The second quey in the Ayr Derby was the winner of the Glasgow Derby, Mr. James Lawrie's Beauty IV., from West Newton, Strathavon. This is a cow of different caliber from Senorita. She lacks the substance of the winner, and yet she excels her in the formation of her fore-vessel, as it is called. She has a smarter head and carries her neck better, but when these things have been mentioned the points wherein she excels have been declared. She has a typical vessel of the fashionable order, and her teats are not so well planted or so long and well shaped as those of the winner. She is, however, a smart cow, and her dam, Beauty I., was the champion female at the H. & A. S. Show at Dumfries in 1895.

A very interesting department at Ayr is that for groups of Ayrshire cattle. Messrs. Kerr had no other forward but Senorita, and hence were not in these competitions. First prize for group of three, bred and owned by exhibitor, went to Mr. Alexander Cross, of Knockdon, who has a fine herd and had several in the Derby. Mr. John Drennan, Hillhouse, Galston, had second. He owns the champion cow at Kilmarnock, and she also stood reserve champion at Ayr, where she was first in the class for aged cows in milk. Mr. Drennan has well-framed cattle, with good vessels, but their teats are just to the small side, which breeders in this country are trying to get rid of. Mr. T. C. Lindsay, Aitkenbrae, Monkton, was third, and Mr. Sloan, Treesmax, Ochiltree, was fourth. A most interesting competition is that for the best five cows out of any one parish. It is called the parish competition. Mr. Drennan led in this competition, being followed by Messrs. R. & J. McAlister, Mid-Ascog, Rothesay, who have a splendid herd of dairy cattle in Bute, and Mr. Cross was third. In the male section, the leading aged bulls (that is, 3 years old and over) this year are Mr. Robert Osborne's Gigantic Stunner, which won the male championship at Kilmarnock and Ayr, and Mr. John McKean's Douglasdale, from Dam of Aber, Kilmarnock, which won the same trophy. Unfortunately, these bulls have not met, and they will not meet now, as Mr. Hunter, from Canada, has bought Douglasdale, along with several choice cows and heifers, some of which have been winning at these shows.

Clydesdales are this year very good. Amongst the younger stock, the produce of Messrs. Montgomery's Baron's Pride 9122 are making a clean sweep at all the shows, and, so far, the best female of the season is the 3-year-old Jeannie Deans, from Mr. Thomas Smith's stud at Blaen Point, Chester. She has taken champion honors at Castle Douglas, Kilmarnock, and Ayr, and is improving as the season advances. The brood mares at Glasgow and Kilmarnock were led by daughters of Sir Everard, the sire of Baron's Pride, Mr. Holmes' Lady Raffan, a fine type of mare, which has won first four times at Glasgow, being the former, and Mr. Guild's Lady Margaret, a right good mare, the latter. At Ayr, the first brood mare was Mr. William Park's Sunray, from Portobello, a daughter of Prince Alexander 8899. The Marquis of Londonderry is showing a fine mare by Sir Everard, named Essence 13007. She was first at Kilmarnock, and second at Glasgow and Ayr, being beaten on the former occasion by Montrave Rowena, which stood first at the Highland last year, and on the latter by Mr. Sinclair Scott's Scottish Peeress, a handsome big daughter of Baron's Pride, which stood second at Kilmarnock. Mr. Scott has a very bonnie yearling filly, named Scottish Grace, by the same sire, which stood first at Ayr and second at Castle Douglas and Kilmarnock.

Amongst horses, the leading championships have gone to Mr. John Pollock's great horse, Hiawatha, the dual winner of the Cawdor Cup in previous years, and this year champion of all male Clydesdales at Glasgow and Ayr. The best 3-year-old stallion of the spring shows is Mr. Herbert Webster's Baron Kitchener, a lovely horse, by Baron's Pride, which stood second at the Highland last year. He was reserve champion at Glasgow and Ayr, and on the latter occasion beat his successful opponent of last year, Mr. Thomas Smith's Drumflower 10537, a horse of great substance and size, got by Macgregor. The best 2-year-old colt of the season is Mr. William Dunlop's Sylvander 10033, which won first at Kilmarnock, Glasgow, and Ayr. He is a son of Montrave Mac, the son in his turn of the celebrated Macgregor and Montrave Maud, and his own dam was the champion mare, Mary Kerr, which has, unfortunately, died within the past few days. Two-year-old fillies have been the least uniform class of the season, and no one of them has been able to walk supreme. At Castle Douglas and Kilmarnock Mr. Picken led the way; at Glasgow, Mr. Webster's Lady Florence was first, and at Ayr, Mr. Guild's Topsy Pride, the unbeaten yearling of 1899, was first. We put our money on the last as the best.

A splendid sale of Hackneys was held at Gowanbank, Darvel, Mr. Alexander Morton's stud farm, on Thursday. Trade was brisk, and the horses were a truly grand lot. Sixteen ponies made an average of £59 14s. 4d., one of them, a perfect gem, named Fiona 10018, making no less than £294, and another, Snapshot, a 5-year-old gelding, making £168. Thirty-two harness horses and mares made an average of £87 1s. 5d. each, the highest figure being £315 paid for the 10-year-old mare, Cicely 5138, a former champion winner at London; while other single animals made £210, £131 5s., £126, £127 1s., £110 5s., and £105. Eleven brood mares were sold at

an average of £80 5s. 6d., the highest prices being £157 10s., and £147. Altogether the 59 horses sold made an average of £78 9s. 4d. If such prices as these could always be obtained, Hackney breeding in Scotland would pay. "SCOTLAND YET."

### The Embargo on Argentine Cattle.

According to the official statement of Hon. Mr. Long, chairman of the British Board of Agriculture, 154 head of cattle were certified to be affected with foot and mouth disease, out of the 244 brought to Deptford from Buenos Ayres by the steamer Ethelhilda. It was upon the foregoing that the order of the British Board of Agriculture, forbidding the landing of live cattle from the Argentine Republic after May 1st, was issued. Commenting thereon, the English *Live Stock Journal* says:

"It will be regretted by breeders that such a step is necessary in the case of the Argentine Republic, which has during the past few years proved such a good customer for our pedigree cattle and sheep. The trade in cattle and sheep from the Argentine to this country is large, and had been steadily growing until last year, when we received 85,365 oxen and 382,080 sheep, these figures showing a diminution in both classes as compared with 1898; still, even the lower figures represent about 1,700 cattle and 76,000 sheep weekly, constituting a very considerable contribution to the food supply. The value of the importations in 1899 was £1,392,509 for cattle, and £598,436 for sheep, making a total of nearly two million pounds sterling, and the loss of this will be a heavy blow to the Argentine, and for some time will appreciably affect the supplies in our markets. It will not, however, be lost, because there will, no doubt, be a rapid development of the dead-meat trade. Last year the Argentine sent 1,141,208 cwt. of fresh mutton of the value of £1,490,166, and, under the new regulations, this trade is likely to be largely increased, for even while the animals could be landed for slaughter, it has doubled in extent in about four years. Similar arrangements will be, no doubt, made for the shipment of beef. Nor should the temporary prohibition affect the demand for pedigree stock, as the quality must be maintained; and the Argentine will have everything to gain in steadily improving her flocks and herds, so as to compete, as has been done in the past, with the imports from North America."

The *Review of the River Platte*, Buenos Ayres, concedes the existence of the disease in the following editorial paragraph: "It is to be hoped that the energetic measures which have been taken by the authorities of the nation and the Province of Buenos Ayres will lead to the early extirpation of foot and mouth disease. Fortunately there is not the same reason to fear it as if our animals were stall-fed; but none the less is the outbreak a serious thing for our trade. The disease must have been imported from some other country; but this will not prevent that country from declining to receive animals from here, until such time as the disease is thoroughly stamped out."

### Good Grooming Pays.

Though many horse owners do not seem to appreciate it, the grooming which an animal receives when properly kept plays almost as important a

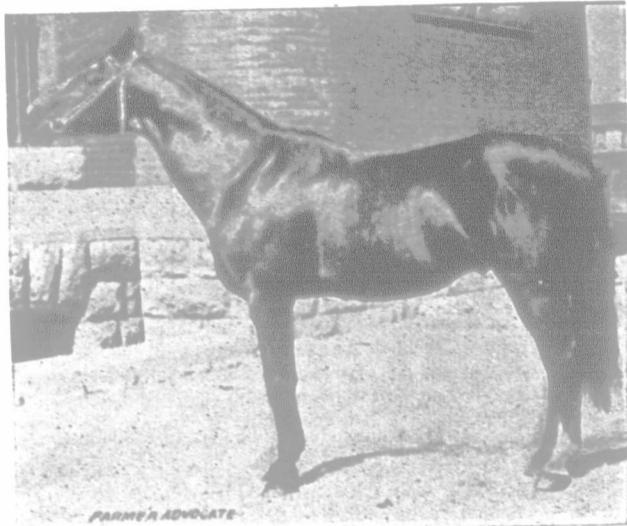


**THOROUGHBRED STALLION, VERSATILE.**  
First prize and sweepstakes at Canadian Horse Show.  
OWNED BY WM. HENDRIE, HAMILTON, ONT.

part in the maintenance of the health of an animal as the food which it gets. There is nothing more conducive to the maintenance of the good health of an animal than a vigorous application of the curry-comb and brush from day to day. Such treatment helps to open the pores of the skin, and thus facilitates the getting rid—through perspiration—of certain waste matters, which, if allowed to remain in the system, would prove distinctly injurious. Just as in certain human ailments, much benefit is derived from the production of a vigorous perspiration, which enables certain materials to be removed from the tissues of the body, so, also, in the case of horses, the maintenance of the healthy condition of the skin facilitates the removal of certain substances which are known to be conducive to various diseases.

### Breeding and Feeding the Bacon Curer's Pig.

The journal of the British Dairy Farmers' Association contains an extensive paper on the above subject, by J. M. Harris, of Calne, Wiltshire, Eng., in which he favors the large white Yorkshire, either pure or crossed with the Berkshire, giving pigs which feed well, mature quickly, are very prolific, are not thick in the shoulder, are thin in the skin, not too thick in the back, and which yield a side thick in the streaky or belly part. Pure-bred sires—not crosses or mongrels—should be used, otherwise the farrows will not be so large and the individual pigs will often be dwarfed, there will be two or three small ones in every farrow, and all the offspring will be thin in the belly or flank. Is there any other animal used for the food of man so prolific, so easily housed, fed with so little labor and at so small a cost, and which is worth so much at the same age?



**THOROUGHBRED STALLION, WYNDHAM.**  
First prize at Canadian Horse Show in class for stallions to improve the breed of Saddle Horses and Hunters.  
OWNED BY S. B. FULLER, WOODSTOCK, ONT.

A pig for profit should at six or seven months of age weigh from 130 to 170 lbs. dressed weight, this being the size that obtains the price. If the feeder has a pig well bred, and feeds properly, he can easily bring him up to his weight within the stated time, and he should then be worth from £3 to £4.

Mr. Harris describes an extended series of experiments started three years ago in Calne under direction of a committee of farmers and others interested in the economical production of high-class bacon. Four styes were erected, and in their construction special attention was bestowed on ventilation and cleanliness, for it is a great fallacy to assume that pigs thrive well in filthy and unhealthy surroundings. Each of the styes accommodated ten pigs, and every experiment commenced with 40 pigs fed, as a rule, on four different diets. The animals received three meals per diem, as much as they could clean up each time. The dry food, meal, bran, etc., was soaked over night in water, in the proportion of one peck of the former to five gallons of the latter, except when milk was used, when it replaced its own volume of water in the mixture. The potatoes were boiled and the mangels sliced. Care should be taken not to make the food of pigs too sloppy.

Up to the present there were carried out 64 experiments, involving 24 diets, on a total of 640 pigs. The principal foods used so far are: Barley meal, corn meal, separated milk, bran, potatoes, pea meal, bean meal, crushed oats, wheat meal, and corn germs. The average weight of the pigs at the commencement of fattening varied from 83 lbs. in one experiment to 141 lbs. in another, and the duration of fattening varied from seven to fourteen weeks. The pigs fed were not especially selected for breed, etc., but were purchased in the same manner as a farmer usually employs. All the food supplied during the experiments was weighed, and the weight of each of the pens of pigs was, as a rule, taken weekly and recorded.

Careful observation of these records confirms the statement made some years ago by the great Rothamsted investigators that the quantity of food required to produce a given increase in live weight becomes greater as the period of fattening progresses. It was also observed that after a pig attained a weight of about 170 lbs. the weekly increase was, as a rule, less than during the earlier stages of the fattening. The facts are of importance in view of the light weight of pigs now required for bacon than was formerly the case. To those who buy their store pigs it may be well to point out that these experiments go to show that, other conditions being similar, the younger pig may be reasonably expected to yield the greater weekly profit. This remark applies to pigs ranging between 83 lbs. and 141 lbs.

In these experiments the highest weekly gain in weight was obtained with a diet of barley meal, separated milk, one gallon, and potatoes, three pounds per diem; the second in order of merit being barley meal and one gallon separated milk per diem; whilst the lowest two results were obtained with corn meal. Barley meal always gave a greater weekly increase than corn meal, both when

used alone and when used in conjunction with other foods. The addition of separated milk to either corn meal or barley meal produced a considerable increase in the weekly gain, as did also the addition of either pea meal or bean meal. The addition of bean to either barley or corn lowered the weekly gain considerably.

Referring to loss on killing and dressing, the least loss was on pigs fed on corn meal alone (22.9 per cent.), and on corn meal and separated milk (23.2 per cent.); whilst the greatest was with pigs fed on barley meal and bran (27.9 per cent.), and barley meal alone (25.6 per cent.). Corn-fed pigs lost less on killing and dressing than barley-fed ones. The addition of separated milk to either barley or corn caused the loss on killing and dressing to be slightly less. The addition of bran, peas or beans to either corn or barley caused a much greater loss on killing. Referring to the suitability of the flesh obtained for the production of the best bacon, the following table gives the foods, in order of merit, commencing with the best. The best quality is taken as 1,000 points:

	Maximum Points.
(1) Barley meal and bran.....	990
(2) Barley meal and separated milk.....	988
(3) Barley meal.....	974
(4) Barley meal, separated milk and potatoes.....	967
(5) Corn meal and bran.....	964
(6) Corn meal and bean meal.....	951
(7) Corn meal and separated milk.....	945
(8) Corn meal.....	939
(9) Corn meal and pea meal.....	908

The comparatively low value assigned to pigs fed on corn meal and pea meal is due to a large proportion of the pigs so fed increasing very slowly and being sold when too small to come within the scales shown above. The quality of those which did well—i. e., gave a good increase—was about equal to those which had been fed on corn meal and bran. The addition of either bean meal or pea meal to maize gave far better results in cold than in hot weather, and both kinds of pulse varied very much in efficiency with different individual pigs. Some pigs did very poorly with these diets, whilst others did exceptionally well, so that special care is necessary in their use. Excess of fat was the general failing of corn-fed pigs, but was less pronounced in pigs which had been fed on a mixture of corn with either separated milk, bran, bean meal or pea meal. A larger proportion of best pigs for bacon was obtained with barley than with corn feeding. The addition of either milk or bran, but especially the latter, to either barley or corn raised the best proportion of pigs.

### Docking and Castrating Lambs.

In our last issue appeared a paragraph calling attention to the necessity and importance of attending to the matter of tailing and castrating lambs in the spring while they are yet young. Heavy loss is occasioned to owners of lambs and to dealers every year by the neglect of these operations, as ram lambs come upon the markets in October and November in large numbers, and are sold at very much lower prices than wether or ewe lambs, for the reason that their flesh is strong in the breeding season, and that they fail to put on flesh by worrying themselves and the other sheep they are with, and are for this reason a great nuisance. By all means let all lambs intended for the butcher be docked, as it improves their appearance and tends to cleanliness, and let the ram lambs be castrated early. The ideal time for both operations is at two weeks old, but if it has not been attended to at that age, let it be done at any time up to 6 or 8 weeks. At this age a little more care and attention is required, as they are more liable to bleed unduly; but if they seem to be bleeding too freely or continuing to drop blood for more than an hour, a piece of binder twine or other soft cord tied moderately tight around the stump will stop it. This should be cut away in a few hours after. We have docked lambs safely at six months old, and by cording in this way there is very little risk. Of course, if done in fly time, some carbolized oil or sheep dip should be applied to prevent maggots. Docking young lambs is done simply by placing the knife at the second or third joint of the tail and cutting upward against the thumb. There is little or no danger of cutting the thumb, but if one is nervous, a glove may be worn, or a rag wound round the thumb. Some shepherds have the attendant hold the lamb between the knees, back down, while the operator cuts downward and thus details the lamb at one cut. When the two operations are performed at the same time, as they generally are, castration should be first attended to, as the spurting of blood from the docking would be unpleasant to the operator.

Inexperienced operators are liable to be nervous in performing castration, but with a little practice and confidence there is very little risk in it. Mr. Henry Arkell, of Teeswater, Ont., an old and experienced sheep-breeder, in an article in this paper nearly a year ago (June 20th issue, 1899, page 321), stated that he had operated on thousands without a single loss, and gave very plain instructions for performing this operation, which in a few words may be summarized thus: Cut off the end of the scrotum, or sack, place the thumb and forefinger of the left hand close to the body of the lamb, and force the testicles forward, seize them one at a time with the teeth or a pair of forceps and gently draw them out, casings and all, keeping the thumb and finger moderately tight together close to the body of the lamb. That is really all there is to it. Many

American shepherds write that it is entirely safe when the lambs are a week or ten days old to clip the scrotum with its contents clean off with the shears, not too close to the body. We have not seen this done, and therefore do not vouch for it, but it has been so often repeated in American stock papers without refutation that one is led to consider it worth a trial on a limited scale, as it is so simple; but if the former plan is as safe, the lamb will sell a little better, as a rule, for having some show of scrotum.

### Stall Fed vs. Feeding Loose.

To the Editor FARMER'S ADVOCATE:

DEAR SIR,—In reply to "Stall Fed," re "Enquiries on Loose Feeding," I would say regarding the statement made in "Successful Farming," pages 229 and 230, that "steers dehorned and fed loose will gain more in five months than those tied will gain in six, and on the same feed." The above is based on two experiments made at the Ontario Agricultural College, first in the winter of 1897-98 (see Annual Report of 1898, pages 188 and 189). Fifteen steers tied made an average gain of 291½ in six months, while six steers loose made an average gain of 330 in five months. The second experiment was made in winter of 1898-99. Eleven steers tied made an average gain of 288 in five months, while nine steers loose made an average gain of 311 in four months. As the writer left the College before the Report for 1899 was compiled, this second experiment was not published. Ordinary box stalls were used for the loose feeding, 14x15 feet, three steers in each, which was more space than necessary.

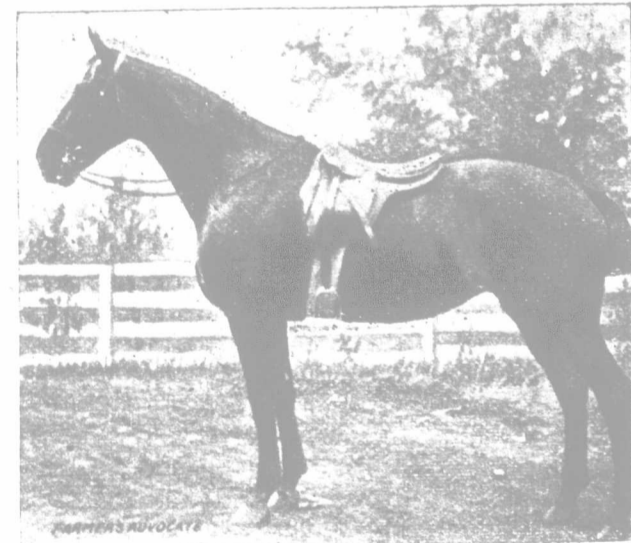
For feeding and watering cattle I would refer to "Successful Farming," pages 194-196 and 197. The cattle stand in rows three feet apart, without stalls, tail to tail. All animals are better loose, except when eating and drinking. By using the stanchions illustrated on page 196, all can be opened or closed by one operation at feeding time. Each animal puts its head in one of the openings. When all commence feeding, the stanchions are closed for about one and a half hours until all are through, when the rod is drawn and the animals are again allowed their freedom. The feed troughs and water basins are in the front passage, as illustrated; the passage is raised 12 inches to form back of trough. Temporary partitions may be put across so that there will not be more than eight or ten animals in each compartment when loose, and those should be as near equal in size as possible. The gutters behind the cattle (when tied) should be two feet wide and fifteen inches deep; the passage between the gutters should be eleven feet wide, so that a waggon or cart can be backed in and loaded out of the gutters; the floor should slope to the gutters. Very little bedding is necessary, if the droppings are thrown into the gutters say twice each day when the cattle are feeding; the gutters should be cleaned out as soon as filled.

Toronto, May 9, 1900.

W. M. RENNIE, SR.

### Barley Meal as a Pig Food.

As a food for pigs, more especially where the aim is, as it always should be, the production of the very best quality of bacon, barley meal has no superior, and many of our most successful pig breeders doubt



**JOY BELL, 16 HANDS.**

First prize at Canadian Horse Show as combination Saddle and Harness Horse.

OWNED BY LLEWELLYN MEREDITH, LONDON, ONT.

if it has any equal. One of the great points in its favor is that it may be given with safety to pigs of the most tender age. Scalded with warm water, and then worked into a sloppy mash with skim milk, it forms one of the best of all foods for pigs just after being weaned. It "goes" very well with potatoes, and is very largely used in this way in different parts of Ireland where hundreds of pigs are reared every year upon a mixture consisting of barley meal, maize meal, and cooked potatoes, all worked into a common mash. Where the production of bacon of the highest quality is being aimed at, the allowance of potatoes and Indian meal should not be overdone on account of the tendency both to produce over-fat bacon. Bacon obtained from pigs largely fed on Indian meal possess comparatively poor keeping qualities.

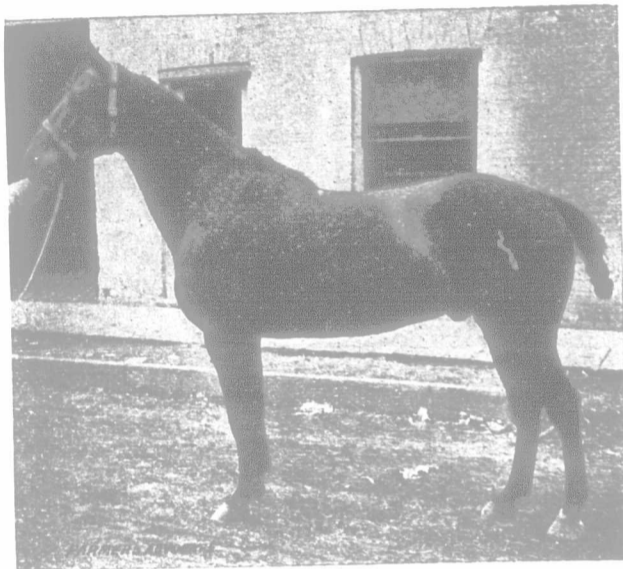


**Utility and Beauty Combined.**

BY VALANCEY E. FULLER.

So much has appeared from able pens on the true "type" of the Jersey cow in the *ADVOCATE*, I think Jersey breeders will be interested in the facts herein set out.

In communications addressed to the American stock papers some time ago I contended that beauty and utility could be combined in one and the same cow; that while ability at the pail and churn must be the first consideration, the trend of the public market showed an increasing demand for both in combination. By "beauty" I do not mean merely a beautiful head, eye and pair of horns, and slim, delicate legs; but rather the true type of the dairy cow—long, straight of back, with good loins, long and straight from hip bone to setting-on of tail, wedge-shaped body, with flat, open ribs; a deep, large paunch; large and capacious udder, with a



**GENERAL, 16 HANDS HIGH, 5 YEARS OLD.**  
First prize at Canadian Horse Show in class for cavalry purposes, bred and owned in Canada.  
OWNED BY CHAS. HEAD, GUELPH, ONT.

full front; good-sized and well-placed teats, accompanied by evidence of good lung power and constitution.

The question that has often arisen in my mind is, have we, as breeders, in our effort to add to the size and constitution of our American and Canadian bred Jerseys, departed too far from the Island type, and if so, has such departure resulted in benefit to the breed as producers at the pail and churn, as compared with the Island-bred of to-day?

It is only in comparatively recent years that the Islanders have been encouraging public butter tests at their fairs. Their great fair is held in May each year, under the auspices of the Royal Jersey Agricultural and Horticultural Society. I have before me the reports of the butter tests for the years of 1897 and 1898 (I have not seen that for 1899), and quote the records made by the cows entered in these two competitions. The yield of milk and butter is for 24 hours. The cows were milked out 12 hours before the test; the cream was separated by a "separator," the night of the test, and was churned early next morning.

At the show held at St. Helier's, Jersey, May 13th, 1897, there were 38 competitors, 11 of whom made from 2 pounds of butter up to 3 lbs. 2½ ozs. in 24 hours, the quantities given being: 3 lbs. 2½ ozs.; 2 lbs. 5½ ozs.; 2 lbs. 4½ ozs.; 2 lbs. 3½ ozs.; 2 lbs. 2½ ozs.; 2 lbs. 1½ ozs.; 2 lbs. 1 oz.; 2 lbs. ¾ oz. and three giving exactly 2 lbs. The quantity of milk given in 24 hours was as follows, by those milking the highest: First, 50 lbs. 8 ozs.; 2nd, 46 lbs. 2 ozs.; 3rd, 43 lbs. 12 ozs.; 4th, 43 lbs. 6 ozs.; 5th, 42 lbs. 11 ozs.; 6th, 42 lbs. 4 ozs.; 7th, 40 lbs. 12 ozs.; 8th, 40 lbs. 6 ozs.; 9th, 40 lbs. Three medals were awarded, and thirteen certificates of merit. Of the 16 prize-takers and certificate-winners, the average per cow was: Milk, 37 lbs. 11 ozs.; butter, 2 lbs. 11 ozs. Of the 38 cows competing, the average per head was: Milk, 33 lbs. 15½ ozs.; butter, 1 lb. 12 ozs.

In the May, 1898, show 42 competed. Eight gave over 40 lbs. of milk in 24 hours, as follows: First, 55 lbs. 14 ozs.; 2nd, 46 lbs. 6 ozs.; 3rd, 44 lbs. 14 ozs.; 4th and 5th, a tie, 43 lbs. 8 ozs.; 6th, 43 lbs. 6 ozs.; 7th, 41 lbs. 12 ozs.; 8th, 40 lbs. 8 ozs. Twelve cows out of the 42 competing made from 2 lbs. of butter in 24 hours up to 2 lbs. 10½ ozs.; 2nd highest, 2 lbs. 8½ ozs.; 3rd, 2 lbs. 6 ozs.; 4th, 2 lbs. 6½ ozs.; 5th, 2 lbs. 5 ozs.; 6th, 2 lbs. 4½ ozs.; 7th, 2 lbs. 4 ozs.; 8th, 2 lbs. 3½ ozs.; 9th, 2 lbs. 3½ ozs.; 10th, 2 lbs. 2 ozs. The average for these 24 head in 24 hours was: Milk, 35 lbs. 10½ ozs.; butter, 2 lbs. The average for the whole 42 was: Milk, 33 lbs. 4½ ozs.; butter, 1 lb. 12½ ozs.

Those familiar with the records of American and Canadian Jerseys at the public fairs will know that the above tests are most creditable. In making the comparisons, however, it must be borne in mind that the Island being so small, the show is available to all, and the cows have but a short way to go to attend it, and grass is at its flush at that time. On the other hand, most people familiar with testing will say that the cows being milked on Wednesday, the cream separated that night, and the churning beginning at a quarter to seven the following morning, the cream did not have sufficient time to ripen, and consequently did not produce so great a quantity as if it had been ripened.

I am aware that one swallow does not make a summer, but these public records are the only means we have of forming any correct opinion, and they show that the Island bred Jerseys possess ability at the pail and churn of no mean order, and if, as is

generally conceded, they possess "beauty" as I have defined it, the Island breeders have gone a long way towards solving the problem of combining beauty and utility.

It will, I hope, be of some interest to your readers to learn something of the records made by the English Jerseys in these public tests. I will take as examples one held in the spring of the year and another later in the season. With the exception of the "Tring" 1899 report, the latest available to me are those of 1897.

The "Royal Counties Show" was held at Reading, June 7th, 1897. At this show there was no division into classes by live weight. There were 13 Jerseys competing.

The highest yields are: Milk, 56 lbs. 12 ozs.; 52 lbs. 8 ozs.; 51 lbs. 4 ozs.; 51 lbs. 4 ozs.; 47 lbs. 12 ozs., and as low as 19 lbs. 12 ozs. The highest butter records were: 2 lbs. 12½ ozs.; 2 lbs. 12½ ozs.; 3 lbs. 6½ ozs.; 2 lbs. 3½ ozs.; and as low as 1 lb. 3 ozs. The average for the eight Jersey prize or certificate winners was: Milk, 45 lbs. 11½ ozs.; butter 2 lbs. 3½ ozs. The average of the whole thirteen Jerseys was: Milk, 39 lbs. 5½ ozs.; butter, 1 lb. 14½ ozs.

Through the courtesy of a friend, who has kindly loaned me his report, I am enabled to quote the "Tring" butter tests and milking trials held August 10th, 1899, at Tring. At this show more cows are entered in the contest than at any other fair or show in the world. It is open to all breeds and to grades (in England, called "cross-bred"), and 1 "Dutch." The competition was divided into two classes: 1, cows exceeding 900 lbs. live weight; 2, cows not exceeding 900 lbs. live weight. I have examined the records of a great many public tests or trials, but I never saw one in which the cows in class 1, as a whole, gave such an enormous flow of milk, the average of the whole 40 cows entered therein being in excess of 46 lbs. per head. The milkings of the Shorthorns were the highest, one giving 62 lbs. 5 ozs., and two others over 60 lbs. The highest milkings of the Jerseys in class 1 (of which there were fourteen entered) were as follows: 51 lbs. 11 ozs.; 47 lbs. 15 ozs.; 45 lbs. 6 ozs.; 43 lbs. 2 ozs.; 42 lbs. 14 ozs. Notwithstanding the variance in milk between the Shorthorns and the Jerseys, when the buttermaking quality of the milk is reached, the ever-superiority of the Jersey milk demonstrates itself, as the Jerseys captured all four prizes or medals awarded in the butter tests. In the milk tests the Shorthorns took three prizes and the "Cross-breds" one.

The greatest quantity of butter made by the Jerseys was: 3 lbs. 6½ ozs.; 2 lbs. 15½ ozs.; 2 lbs. 5½ ozs.; 2 lbs. 4 ozs.; 2 lbs. 2½ ozs.; 2 lbs. 2 ozs.; 2 lbs. 1½ ozs., and 2 lbs. 1½ ozs.

In other words, out of 14 Jerseys competing, eight made more than two pounds a day each, and an average of 2 lbs. 6½ ozs. each; the total average of the 14 Jerseys was 1 lb. 15 ozs.

At the same show, in class 2 (cows of less than 900 lbs. live weight), all of the 32 competing were Jerseys, with the exception of 1 "Cross-bred." There were eight Jerseys which gave 40 lbs. or more in 24 hours, in the following order:

Fifty-four pounds 8 ozs.; 48 lbs. 13 ozs.; 45 lbs. 12 ozs.; 43 lbs. 15 ozs.; 41 lbs. 8 ozs.; 41 lbs. 3 ozs.; and 41 lbs. 1 oz. Eleven made two pounds of butter or more in 34 hours, as follows: 3 lbs. 4½ ozs.; 2 lbs. 6½ ozs.; 2 lbs. 5½ ozs.; 2 lbs. 4½ ozs.; 2 lbs. 3½ ozs.; 3 lbs. 2 ozs.; 2 lbs. 2 ozs.; 2 lbs. 1 oz.; 2 lbs. 1 oz.; 2 lbs. 1 oz.

Without actually analyzing the figures, what strikes me from examining the various records between the cows of 900 lbs. or over and those under 900 lbs. is that the cows in the first class give as a rule a larger flow of milk than those in class 2; but, as is usually the case, the milk of the cows giving the smaller quantity of milk is richer in butter than the milk of the cows of the heavier class. Another deduction that cannot fail to be drawn by a careful examination of these figures is that the cows show great capacity at the pail and churn. If it be true that the English breeders have kept, as a rule, to the Island type, usually through the constant introduction of Island-bred bulls, these public tests tend to demonstrate that in England, as on the Island, the Island type can be combined with great ability at the pail and churn.

It is impossible to quote the public tests made in this country, as the fairs are so far apart, and there has been no especial effort made on the part of our breeders to enter their cows in public tests, which I think is to be regretted. The Jersey cow is par excellence the butter cow, and consequently the cheese cow. She has of late years become a very deep milker. If we, as breeders, demonstrate her unquestionable ability at the pail and churn by public records (as we have done by private ones), we will give a great impetus to the Jersey interest. As evidence of this fact, we have only to point to the greatly increased demand for Jerseys that followed the World's Fair dairy tests. We cannot conceal the fact that a majority of the dairy farmers who have never handled Jerseys, and who consequently are unaware of their great capacity at the pail and churn, are sceptical of our private tests. Breeders must look to the dairy farmers to absorb their surplus stock. We have the material wherewith to gain the confidence of the dairy farmers, so much desired. I know of no means that will so much tend to that end as public tests. We can force such unbelief into absolute confidence. "The doubting Thomas," once convinced against his will, becomes an enthusiast and does missionary work among his former brother-sceptics. The interest of breeders demands that efforts be made to enter our best cows in dairy tests, provided the rules governing such tests are fair to the Jerseys.

**Maryland Pig Feeding Tests.**

Among the conclusions derived from a number of experiments carried out at the Maryland Experiment Station, the following are of interest:

1. It was found that with some rations the gains on pigs could be produced as low as 2½ cents per pound.
2. In all the tests where properly-compounded rations were used pork was produced at a profit when the pigs were not allowed to become too old.
3. The cost of producing a pound of pork increases with the age of a pig.
4. The aim should be to produce from 150 to 200 lb. pigs at six to seven months old for the greatest profit.
5. Skim milk was found to have a feeding value for pigs equal to fully double the price charged at most of the creameries of the State.
6. Separator skim milk at 1 cent per gallon, and linseed and gluten meals at \$15 per ton, have about the same value for balancing rations for pig feed.
7. Gluten meal was found to be more economical for balancing rations for pigs than linseed meal.
8. Sweet potato strings, cow pea pasture, when properly used, produced pork economically.

**Horses for the War.**

During the first four months of this year the British War Office have shipped to South Africa as remounts, in addition to horses and mules sent with troops, 27,041 horses and 17,143 mules. Between the 1st and 25th of May they expected to embark another 7,500 horses and 4,500 mules, and they had 7,300 horses and 2,000 mules on order, for which no date of embarkation had yet been fixed; so that the total of remounts bought since the beginning of the year was about 42,000 horses and about 23,000 mules.

**Feeding for Milk.**

Almost every dairy farmer has his own combination of foods for the production of milk. An extensive English breeder pins his faith to the following mixture: 2 lbs. each of decorticated cotton cake, bran, malt combs, and Indian meal, 20 lbs. mangels, pulped, and about a stone and a half per day of good sweet hay. It is high feeding, but where the milk can be disposed of at a fair price it should pay and pay well. No one need expect his cows to distinguish themselves at the pail unless they are liberally and judiciously fed.

**Draft Stallions on the Road.**

The prospects are that good stallions will have a heavy season and should therefore have the very best attention. A good horse on the road requires to be well and carefully fed, and should never be disturbed in any way when at meals. If there is grooming to be done, let it be done with an empty manger, as disturbed mastication frequently ends in internal maladies. The application of the brush to the coat should be done in a soothing and, as far as possible, non-irritating manner, and the feather should be combed out freely night and morning, the feet at the same time being attended to. On the road the greatest care should be taken not to heat the horse, the walk being from two miles to four



**HERO, 15½ HANDS, 5 YEARS.**  
First prize at Canadian Horse Show in class for horses suitable for mounted infantry, owned and bred in Canada.  
OWNED BY CHAS. HEAD, GUELPH, ONT.

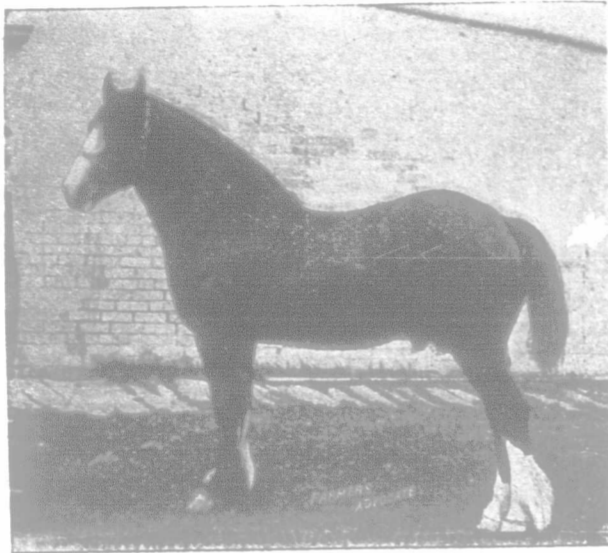
and a half, according to the temperature of the weather. If cycle-frequented tracks can be avoided, so much the better, as the plunging from fright or scare is likely at one time or other to lead to accidents. In regard to the number of mares to be served per day, a judicious groom may be allowed to use his discretion, though with notorious non-stock-getters the rule is "all and everything that comes." Sometimes the same policy is pursued with 3-year-olds which the owner means to sell, the result being most likely the spoiling of a good stock horse for the remainder of his career. In cold, wet seasons the greatest care must be taken of the horse, a chill when in high condition often causing inflammation of the intestines and death. All through, indeed, the stallion on the road is a cause of continual anxiety and care.

### Dairy or Beef---Which?

Mr. J. W. Scott, in the *Mower County (Minn.) Transcript*, brings out some very interesting facts and experiments to show the wonderful superiority of the dairy cow over the bullock in the power to produce available human food from a given amount of feed.

No living machine on earth is equal to the cow in this respect. Then follows the effort of the breeder to increase the wonderful power. Mr. Scott says:

It is a fact worthy of mention that the dairy cow excels in the power to eat food and convert it into that which is suitable for man's sustenance. Take, for instance, the Ayrshire cow, Duchess of Smithfield, H. R. No. 4256, weight 1,128 lbs.; has yielded in one year 10,748 lbs. of milk, which is nine times her own weight in food product. Again, Lady Fox, Ayrshire, H. R. No. 9669, weight 960 lbs., yielded in one year 12,209 lbs. of milk, containing 535 lbs. of butter-fat. The milk contained 13.5 per



CLYDESDALE STALLION, PRINCE OF KINELLAR (2475).

Winner of second prize as a 3-year-old at the Canadian Horse Show in 1899, where he was owned and exhibited by John Davidson, Ashburn, Ont. (See Gossip, page 25.)

cent. total solids, making 1,060 lbs. solids for the year, or 4.55 lbs. per day. A steer would have to gain 10.21 lbs. live weight per day to produce 4.55 lbs. bone-free dressed meat; but the 4.55 of milk solids is also water-free, and is about 98 per cent. digestible, while the bone-free meat contains about 56 per cent. water, and is only 75 per cent. digestible; so, upon a basis of bone-free and water-free product, a steer would have to gain 21.41 lbs. live weight to equal the daily food product from this cow.

Further, take our own State Experiment Station reports of the Holstein-Friesian called Bess: a yield of 10,087 lbs. of milk in one year, containing 12.75 per cent. total solids, making an annual yield of water-free milk solids of 1,236 lbs., being an average product of milk solids of 3.8 lbs. per day. A steer would have to gain 8.07 lbs. live weight to produce 3.8 lbs. bone-free and water-free meat.

Again, from the same Station reports, we note the Guernsey cow, Sweet Briar, whose annual yield of milk was 6,364.6 lbs., containing 14.70 per cent. solids, making an annual yield of 935.6 lbs. of milk solids, or an average of 2.56 lbs. per day. A steer would have to gain 5.44 lbs. live weight to produce 2.56 lbs. bone-free and water-free dressed meat.

If these figures are not satisfactory, then let us take another comparison. Prof. Henry, in his work, "Feeds and Feeding," says a beef animal should make 3 lbs. of beef on the same food on which a cow makes 1 lb. of butter. Now I will not refer to any particular cow, for I have certified records of several of different breeds that yielded 74 lbs. of milk in one day, containing 4.8 per cent. of fat, or 3.55 lbs. of butter-fat, equal to 4.25 lbs. of butter. So a beef animal should make 12.75 lbs. or over 18 lbs. live weight per day to equal said production.

Now, in contrast with these few illustrations, let us refer to a few Experiment Station reports as to the daily gain in steers:

1ST. ONTARIO AGRICULTURAL COLLEGE.	
Average weight of steers fed on roots and barley.	1,061
Daily gain.	2.11
2ND. SAME STATION.	
Average weight of steers fed on roots and corn.	1,106
Daily gain.	2.31
3RD. KANSAS EXPERIMENT STATION.	
Average weight of steers fed on balanced ration.	1,083
Daily gain.	2.1
4TH. SAME STATION.	
Average weight of steers fed on corn and stover.	1,211
Daily gain.	1.7
5TH. TEXAS EXPERIMENT STATION.	
Average weight of steers fed on corn and cotton seed.	576
Daily gain.	1.9

Further, we may see what may be accomplished by early maturity, by taking the results obtained by Mr. W. A. Harris, of Linwood, Kansas. Mr. Harris fed pure-bred and grade Shorthorn calves, coming in December, January and February, until the following December, at which time they averaged 11 months old. These calves received

most of their dam's milk until 6 or 7 months old. He calculates that they consumed:

20 bushels ear corn, worth.....	\$ 5.00
1,000 lbs. bran, worth.....	6.00
300 lbs. oil meal, worth.....	3.00
Total cost of grain.....	\$ 14.00

Add to this what pasture they could eat and hay at \$4, also the milk from the dam, during the 6 to 7 months. These calves weighed from 910 to 920 lbs. each at 11 months, and sold for from \$3.80 to \$5 per cwt. When the short time for the capital invested is considered, it would seem a satisfactory return.

### No Room for Poor Cows.

There is just one good use for poor dairy cows—their hides make elegant blacksmiths' aprons. The country has a surfeit of them, many of which are in good homes and ought to have their "pictures turned toward the wall." Poor cows are not altogether a question of breed, but like plugged coins are likely to turn up in any denomination. Then, like bad money again, they are either "passed" on to the next fellow or kept at home because they appear to represent something. They are counterfeits, nuisances, gold-bricks—anything that represents a swindle. They have no claim to sympathy—nor feed.

Cut out the poor kind and pay more attention to good cows, good feed and correct methods. The cow you want is one that will return good, honest products in paying quantities without the aid of artificials. She is the cow there is always room for—a money-maker. She may not be just the "type" you want, but if she pays her board and "lays by" a little, she has "type" enough to justify her stall allowance and daily ration. Look out for the good cow and corral every one you can. If she makes gilt-edge dairy goods in paying quantities you can afford the room for her, no matter what breed. Even if she don't happen to be of the breed you like best, and you are after money in the dairy, the good cow will do to keep—until she fails you. But there is no room in the dairy for poor cows—whether they are poor in quantity or quality.—*Jersey Bulletin.*

### U. S. Live Stock Outlook.

And why, pray, should not the stockmen of the United States be for the new order of things? Less than ten years ago your range horses were selling at from \$5 to \$25 on the market. To-day they bring from \$20 to \$50, while your high-class saddle and coach horses are selling at their highest figure, even to \$1,000 each. Less than ten years ago your cattle down here in Texas were sold at \$8 for a cow, with calf thrown in; while to-day the cow is worth from \$15 up, and the calf at least \$10 more.

Less than a decade has passed since wool went "wool gathering" at 8 cents per pound on the range, while next year's crop is now being contracted by the big buyers at 20 cents on the ranch; while your sheep, which wandered aimlessly over the cactus plains and sage brush flats, could find no buyer at \$1.50 and \$2, whereas now anything with wool on its back is being searched for with great diligence at from \$2.50 to \$4 each.

Yes, and not to overlook the American hog: Years ago he squealed for takers at \$2.75 per cwt., while now \$4.75 and \$5 is paid without the squeal being thrown in at all.

Is it any wonder, my friends, when you look the facts squarely in the face, that the live stock industry of the United States is to be found harnessed to the chariot of progress?—*John G. Springer, President of the National Live Stock Association, at the Ft. Worth meeting.*

### How to Feed Pigs.

Owing to the fact that both horses and pigs have only single compartments in their stomachs, and that these organs are of very small size in comparison with the immense four-chambered stomachs possessed by cattle and sheep, the motto of the pig breeder, as well as of the horse owner, should be to "feed often and feed in small quantities." Horses should be fed at least three times a day, and pigs just as often.

One of the reasons why pigs kept by our small farmers thrive so well and keep in such excellent condition, from the time they are bought as weanlings till they are sold as baconers, is because they are continually running about the cottages and picking up bits and scraps of food at almost all hours of the day. Such treatment is much more conducive to their good health and satisfactory progress than that under which they are given large feeds at a time, but given these feeds only at long intervals. And as with pigs, so with horses,

Many fatal cases of colic and other ailments among horses are directly due to giving the animals large feeds of corn after long fasts. Owing to the great hunger from which animals are suffering, they are tempted to overload their stomachs with the food given them, and the inevitable result is that the digestive organs become over-burdened and unable to perform their proper functions.—*Farmers' Gazette.*

### Buying Breeding Stock.

THE CHEAPEST NOT ALWAYS THE BEST.

There seems to be such a general misunderstanding in regard to the values of pure-bred live stock, says a writer in *The Farmer and Stockbreeder*, that I would like a few lines in regard to the matter. I shall speak chiefly of pure-bred cattle, but the statements are generally applicable to all classes of pure-bred stock.

A fair sample of a great many letters received by persons in the pure-bred cattle business is something like this: "Please send me the very lowest price which you will take for one bull and three heifers, all one year old." Now that is a very difficult inquiry to answer. This inquiry means to the breeder, "What will you take for the four poorest and meanest yearlings you have in your herd?" but he very well knows that is not what the prospective buyer wants to know. The inquirer has plainly shown that he is not posted in the pure-blood stock business, and the seller must begin a course of education. It may seem strange, but it is nevertheless true, that a great many persons do not seem to know that all pure-bred animals of the same breed and same age are not of the same value. They seem to think that when they have written to different breeders and obtained prices for animals of the same age, then they have nothing to do but pick the cheapest and go into business. They then wait for a success that never comes. There is no one thing that is doing the live stock interest so much harm as the man who is breeding cheap pure-bred stock. The farmers of this country must learn that the name "pure blood" does not always imply good stock. They must learn that there is such a thing as a pure-blood scrub, and that he is worse than the old-fashioned scrub.

*Pedigree.*—We have passed the day when a pedigree means anything, unless it be backed up by individual merit and an ancestry of like merit. A pedigree is of very little value, except that it shows the animal to be descended from illustrious ancestors—illustrious because of the superior individual merit of each one. It adds very little value to an animal to know that one of his ancestors six or seven generations back was a great prizewinner if none of that ancestor's descendants have proved to be prizewinners. When you find a pedigree all the names on which were illustrious individuals, and the animal himself is also a superior individual, then the word pedigree means something, and you need not fear paying a good round price for him. It is that sort of a pedigree that makes breeders pay a good many dollars for the animal to which it belongs. It is just such a cause as this that makes such a great difference in the prices of pure-bred animals of the same age.

The inexperienced buyer desiring to make his first purchase really derives very little information from the answers to his inquiries for prices which



SHIRE MARES, VIOLET AND MAUD.

Violet, 3 years old, won 2nd in class for Shire mares any age. The pair won 2nd in class for draft pair, any breed, shown in harness.

OWNED AND EXHIBITED AT CANADIAN HORSE SHOW BY JOHN GARDHOUSE, HIGHFIELD, ONT.

he gets from different breeders. He is simply surprised to find out that one breeder asks him from \$75 to \$100 for a yearling heifer, while another one asks him from \$125 to \$150 for a heifer of the same age. The breeder who asks him the lower price probably does the most bragging.

My advice to the buyer would be to go to see both the breeders, spending time enough at each place to learn something, and find out why one asks twice as much money as the other. The chances are ten to one that the breeder asking the higher prices has the animals that are nearest worth what he asks for them. The buyer must judge as to that, but he is generally safe in the hands of a breeder of national reputation.

A very good place to get an education in prices is

at a good sale, or at one of our national or county shows. Here the beginner has an excellent chance for comparison, and can learn what a really good animal is and what it is worth. If many of our young men would spend a little more time in the cattle, sheep and swine departments of our shows, and a little less at the race track, they might learn how to purchase breeding stock a little more intelligently, and when they sell their stock might the better understand why the butcher only gives them about half as much per pound as he gives their neighbor who is up with the times.

**Butter-- From the Stable to the Table.**

BY MISS LAURA ROSE.  
ARTICLE V.

**PASTEURIZING, RIPENING AND GENERAL CARE OF CREAM.**

Pasteurizing is not necessary, nor an improvement, if good flavored butter can be made from the raw cream. But if flavors due to the presence of undesirable germ life, or to the cows getting turnips, weeds, etc., are present, pasteurizing will ensure a mild, good flavored butter, with increased keeping qualities.

Either the whole milk or the cream may be pasteurized, providing it be sweet. In creameries the milk is often pasteurized, and flows immediately into the cream separator.

On the farm it is more practical to keep the cream sweet until sufficient is collected for a churning, then pasteurize it. Place the can holding the cream in a vessel of hot water. Do not have the water rise to over 180° F., or the cream will have a cooked flavor. Heat the cream to 100°, stirring constantly or very frequently. Remove from the fire and allow to stand twenty minutes. Then cool rapidly to ripening temperature, by placing the can in cold water and stirring. The heating drives off any flavors, and kills nearly all bacteria. It makes what is called a clean seed-bed, into which, if we wish the cream to ripen within a reasonable time, we must introduce a starter. The starter may be some sour skim milk or cream, or may be one scientifically prepared with a commercial culture.

A good starter may be obtained by filling a sterilized Gem jar with milk from a healthy fresh milch cow. Set the jar of milk in a warm, clean place to sour naturally. No matter how procured, every starter should have a clean smell, and a sharp, pleasant, acid taste, for remember, you will have in your butter the same flavor as you have in the starter you have added to your cream.

The amount of starter to use depends on the length of time the cream is to be held, the conditions of the weather, and the kind of cream. The amount may vary from five to fifteen per cent. When the cream is to be churned the next day, ten to fifteen per cent. of starter is not too much to use in winter.

If the cream has been pasteurized, when it has been cooled to 80° strain in the starter, stir thoroughly, cool to between 60° and 70°, then stir occasionally to insure even ripening. When it has a slightly acid taste, but has not started to thicken, further cool to 55° or lower, and hold at that temperature until churning time. Always keep the cream can covered.

The more usual way on the farm is to allow the raw cream to sour of its "own sweet will." When the conditions are favorable, splendid butter is often the result. Still, knowing just when necessary to pasteurize, and the judicious use of a starter, gives the buttermaker control over the flavor and ripening of the cream.

It is well to have two cream cans, as there is always a skimming which cannot be added to the can before churning time. No fresh cream should be added to the ripe cream for at least twelve hours before churning. Sweet and ripe cream when mixed together do not give nearly so exhaustive a churning, the buttermilk always showing a greater loss of butter-fat when tested.

The cream can should be well washed, scalded and aired each time used. If the cream is not to be pasteurized, to the first skimming may be added a pint or more of the sour cream on hand. This acts as a starter and controls the flavor. Stir well each time fresh cream is added. Keep in a room where the temperature is from 55° to 65°. When cold cream from the deep-setting cans is added, the temperature is lowered, and so fermentation does not go on too rapidly. Separator cream requires to be cooled before adding to the can. Low ripening temperatures are said to produce a better flavored butter than high temperatures.

When enough acid has developed, the cream should be of the consistency of syrup, and when poured have a smooth, velvety, mirror-like appearance, and an agreeable acid smell and taste. We ripen cream to develop the flavor, improve the keeping qualities of the butter, and to obtain a more exhaustive churning, but if we do not exercise care and skill these results will not follow.

Holding the cream for too long a time at too low a temperature gives a bitter flavor, due to a yeast plant growth.

In many farmhouses care is not taken to prevent the cream from freezing. If at all possible this should not occur, as freezing is detrimental both to the texture and flavor of the butter.

Cream allowed to get overripe gives the butter a whitish appearance and an old buttermilk flavor. Always err on the sweet side.

It is only in recent years that the ripening of

cream has been the subject of much thought and study. Fermentation in cream is the result of the presence of certain forms of bacteria, which convert the milk sugar into lactic acid, causing the souring and thickening of the cream. The lactic acid germ is the most desirable and most prevalent form of bacteria found in cream.

That flavor in butter can be largely controlled by the ripening process has been fully demonstrated, and too much care cannot be given to it.

"A little leaven leaveneth the whole lump."  
O. A. C., Guelph.

**Northwest Territory Crop Statistics.**

The Department of Agriculture at Regina has completed the compilation of threshers' returns for the year 1899. Below will be found a statement showing the result of last season's crop in the various sections of the Territories, as well as a comparison with the figures for the preceding season.

District.	Bushels Threshed.		Acreage.		Average yield per acre.	
	1898.	1899.	1898.	1899.	1898.	1899.
Assiniboia--						
South-east....	727,954	1,261,759				
South-west....	46,210	35				
East Central....	1,142,119	1,079,784				
Central (H)....	1,460,317	1,988,006				
Central (D)....	900,034	1,301,033				
West Central....	500	1,255				
North-east....	175,328	164,609				
<b>Total.....</b>	<b>4,454,462</b>	<b>5,837,141</b>	<b>258,549</b>	<b>312,387</b>	<b>18.15</b>	<b>20.61</b>
Saskatchewan--						
East.....	283,925	238,849				
West.....	14,049	7,518				
<b>Total.....</b>	<b>297,974</b>	<b>246,367</b>	<b>17,704</b>	<b>16,072</b>	<b>18.99</b>	<b>16.17</b>
Alberta--						
North.....	627,201	722,010				
N. Central....	27,432	30,047				
Central....	14,896	8,338				
S. Central....	74,905	30,231				
South.....	47,608	66,257				
<b>Total.....</b>	<b>792,042</b>	<b>863,489</b>	<b>31,327</b>	<b>36,318</b>	<b>24.10</b>	<b>20.22</b>
<b>Grand Total</b>	<b>5,542,478</b>	<b>6,946,997</b>	<b>307,580</b>	<b>364,777</b>		

District.	Bushels Threshed.		Acreage.		Average yield per acre.	
	1898.	1899.	1898.	1899.	1898.	1899.
Assiniboia--						
South-east....	276,219	509,148				
South-west....	17,840	9,086				
East Cent....	237,118	470,828				
Central (H)....	379,219	595,490				
Central (D)....	278,761	489,983				
West Cent....	3,000	19,785				
North-east....	248,868	246,913				
<b>Total.....</b>	<b>1,446,955</b>	<b>2,341,219</b>	<b>58,885</b>	<b>77,357</b>	<b>30.58</b>	<b>35.91</b>
Saskatchewan--						
East.....	127,265	164,527				
West.....	16,152	12,472				
<b>Total.....</b>	<b>143,417</b>	<b>177,000</b>	<b>7,378</b>	<b>6,108</b>	<b>24.67</b>	<b>13.76</b>
Alberta--						
North.....	1,115,358	1,461,821				
North Cent....	134,853	163,450				
Central....	130,204	126,822				
S. Central....	182,226	215,006				
South.....	164,206	255,646				
<b>Total.....</b>	<b>1,726,847</b>	<b>2,222,745</b>	<b>52,751</b>	<b>38,814</b>	<b>43.33</b>	<b>41.81</b>

District.	Bushels Threshed.		Acreage.		Average yield per acre.	
	1898.	1899.	1898.	1899.	1898.	1899.
Assiniboia....	131,141	121,972	6,019	5,769	23.63	25.10
Saskatchewan..	51,717	38,732	2,362	1,887	22.00	21.80
Alberta.....	278,654	185,849	8,711	6,977	30.92	26.48
<b>Total.....</b>	<b>461,512</b>	<b>346,553</b>	<b>17,092</b>	<b>14,633</b>		

It will be noticed that the yield per acre in wheat and oats shows an increase for 1899, while the yield of barley is much below 1898. The total area under cultivation in the Territories was 515,820 acres, as compared to 429,749 in 1898. The average yield per acre for the Territories, calculated on a basis of each individual return, was as follows: Wheat, 1898, 18.01 bushels; 1899, 19.04 bushels. Oats, 1898, 28.93 bushels; 1899, 34.75 bushels. Barley, 1898, 26.29 bushels; 1899, 23.40 bushels.

The number of cows that can be fed off of a given number of acres is limited by the productiveness of the land and the skill of the man in charge. The profitableness of the food grown on a given number of acres depends on the kind of cows to which it is fed and how the food is mixed. It takes approximately as much to feed one cow as another as much for a cow that makes one hundred pounds of butter in a year as one that makes four hundred pounds. To-day half of the cows in Canada are not making more than one hundred and twenty-five pounds of butter a year, which does not pay their board and keep. If they were replaced by good cows the butter product would be doubled without increasing the cost more than twenty-five per cent.

Milk cans should be cared for as soon as returned from the factory to the farm. They should be rinsed in warm water, then thoroughly cleaned and left in the sun to dry, inverting in such a manner as to permit circulation of air. If this is faithfully followed there will be no bad flavors resulting from accumulations of germ life in the seams and covers of the cans.

**Milk Standards.**

At a recent meeting of the Eastern Counties Dairy Association, Chelmsford, Eng., Mr. Primrose McConnell, delivered an address on the subject of milk standards mainly as it relates to the milk supply of cities and towns. He pointed out that the standard adopted by the Society of Public Analysts was 3 per cent. fat and 8½ per cent. solids other than fat, or in all 11½ per cent. solids. The Somerset House standard, which is the referee, is 2.75 per cent. fat and 8.50 per cent. solids other than fat, or in all 11.25 per cent. solids, slightly under the standard of the Public Analysts. Personally he favored a standard of 3 per cent. fat and 8.50 per cent. solids other than fat, or a total of 11.50 per cent., and said if they could not produce milk up to that standard, they had better go back to wheat-growing or something else. It was pointed out that the British expert in adulteration was making great use of separated milk and not of water, and with a fairly high standard the milk producer must let the milk go as he gets it from the cow.

The British Dairy Farmers' Association had conducted a series of tests at the October show, extending over a period of ten years, and he found that in that time they had tested 569 cows, including Jerseys and Guerneys. The average results were 4.27 per cent. fat and 9.07 per cent. solids other than fat, making a total of 13.34 per cent. solids. Leaving out the Jerseys and Guerneys, 314 cows had been tested, and the average results had been 3.95 per cent. butter-fat and 9 per cent. solids other than fat, or a total of 12.95 per cent. solids. Taking some of the cows giving the poorest individual returns, nineteen Dutch cows gave an average of 3.32 per cent. butter-fat and 8.88 per cent. solids other than fat, a total of 12.20 per cent. solids.

The proportion of cows with less than 3 per cent. butter-fat at these competitions was 20 per cent. of the whole, and there were actually 7 per cent. yielding less than 8½ per cent. of solids other than fat. It was sometimes urged that the Dairy Show was not a right place to conduct such tests, that the crowds and the band were bound to have a disturbing influence on the cows. That cut both ways; the effect would be injurious in some cases, and in others the reverse, so that, on the whole, the results would not be materially altered under normal conditions. It had been said by Mr. Stokes, of the St. Pancras Vestry, that the milk from the Eastern counties yielded results exceptionally low in solids other than fat. Of a large number of samples taken, a large proportion were under 9 per cent., and 16 per cent. of the samples yielded less than 8½ per cent. solids other than fat. This allegation led him to examine the results of all the cows shown from the Eastern counties at the Dairy Show. He found that eighteen Shorthorns had been shown in ten years, and that the average results of testing these were: Butter-fat, 3.52 per cent., and solids other than fat, 8.81 per cent., or a total of 12.33 per cent. This agreed with Mr. Stokes' statement. He had also looked into the results from his own cows over six years, and found that his average with mixed milk from sixty or seventy dairy cows of all sorts was 3.61 per cent. butter-fat and 8.78 per cent. solids other than fat, or a total of 12.39 per cent. Hence a standard of 11.50 per cent. total solids would not seem unduly high.

**The Production of Comb Honey.**

Select your strongest colonies for comb production. I do not want bees that build braces or burr combs. Comb-honey supers with braces across them are not nice to handle. Pinch such a queen when the spring work is done, clipping queens, giving rooms to crowded queens by scraping honey at the top of the frames, so that those cells will be replaced with eggs by the queen, levelling up hives, etc., and, before the honey season opens, get the comb supers filled with sections 4x4x1½, which are filled full of foundation, about twelve square feet to the pound, made of the finest wax. Separators are used between sections, and a perforated follower or divider at the sides, which gives extra bee space—a very important point for keeping the necessary heat day and night at the outside of the outside sections.

Hives for comb honey will now be crowded with bees from side to side, and filling up with new honey. Place on them one of the half supers close down. Put on the rim of the hive to keep it warm. When swarming begins, give the bees on the old stand in hives in which there are five starters about two inches deep, the rest of the hive being filled with dummies. After the swarm returns, place the parent hive alongside of the swarm for five days after removing to the new stand, the flying bees of which will go into the swarm and strengthen it. If the swarm is very large, or two go in together, supers are at once taken from the parent hive and placed on the swarm with a perforated metal board between to keep the queen below; but, with an average swarm, do not put the supers on for a day or two. This catches pollen below and keeps it from the sections. Remove the perforated metal board as soon as the queen is at home below, as bees do not work so readily in sections if they have to pass through these screens. Close attention must be given to hives during the honey flow to see if more room is needed, or if the supers have to be reversed from end to center, in order to get the end ones filled as well as the center ones. I always put an empty super next the hive.

### Evolution of a Butter Cow.

The Hon. Joseph H. Walker, of Massachusetts, who has distinguished himself as a breeder of Jersey cattle, as well as a member of Congress, said in one of his catalogues recently:—

"I propose to maintain the following proposition, viz.: That a butter cow is valuable in proportion to the smallness of the feed required by her to make a pound of butter, as opposed to the prevailing custom of valuing cows by the number of pounds of butter they have made in any given time, regardless of the feed they have consumed in doing it.

"Other things being equal, breeding animals are of value in proportion to their near relationship to great performers, and to the number of animals close up in their pedigrees which are also of such blood as is in great performers, and to the volume of that blood in each of their ancestors.

"The longer the period of usefulness of a cow, the more valuable she is, and, furthermore, some allowance ought to be made for the age as well as for the feed of a cow, in valuing her test.

"After a cow's ten-year term, add 10 per cent. to her product for each year after the tenth year, to ascertain her probable butter yield at her prime.

"In the final estimate of cows, their breeding value should be rated in the order of the smallness of the food consumption to the pounds of butter made by them or by their ancestors.

"If butter be worth 30 cents a pound, and it costs 35 dols. to keep a cow, the farmer or dairyman paying:

	In ten years.
\$ 30 for a 200-lb. cow realizes.....	\$ 182.87
125 for a 300-lb. cow realizes.....	354.78
250 for a 400-lb. cow realizes.....	483.49
350 for a 500-lb. cow realizes.....	654.17
450 for a 600-lb. cow realizes.....	811.69

### Broiler Raising at the Guelph College Farm.

To the Editor FARMER'S ADVOCATE:

I herewith enclose a statement of the sale and cost of the early broiler chicks raised and sold by the Guelph Agricultural College. I regret to say that, owing to circumstances, it was impossible to keep an exact account of the food fed. We are experimenting with later broods of chicks in this respect. I think our estimate is, if anything, in excess of the actual cost. We estimated on the food that is being consumed daily by the young chicks we now have.

Jan. 16 158 eggs at 2 cents each.....	\$ 3.16
Oil used in incubator—2½ gallons at 20 cents.....	50
Oil for brooder for six weeks—¾ gallons at 20 cents.....	1.10
May 4—Food consumed to date (estimated).....	5.00
Total.....	\$ 9.76

May the 4th one dozen of the chicks were dressed and sent to Toronto. They sold for \$6 per dozen, netting us \$5.70, there being 30 cents charges. Had the whole flock been dressed (49) in November, at these prices they would have brought \$23.27. Deduct the cost of growing, which is \$9.76, and a balance is left us of \$13.51. Nothing has been charged for labor nor credit allowed.

The thirty-seven chicks not sold are being held for breeding purposes, some of which have already been disposed of to fanciers at prices ranging from \$1 to \$3 each, according to breed and quality. The most of these chickens were Plymouth Rocks and Wyandottes. The twelve dressed weighed 19 pounds.

It will be noticed that it took over three eggs to produce one chick. This is one of the difficulties in connection with the broiler business in our climate. The percentage of fertile eggs is not large, and the vitality of the germs is anything but satisfactory. During the season the fowls are closely confined in the houses the eggs are usually inferior in fertilization. We hope in time to be able to suggest some methods by which this can, to some extent, be overcome.

**How the Chicks were Fed.** No food was given until the chicks were 36 hours old. Care was taken to keep the brooder at a temperature of 90 during the first week, after which it was gradually lowered to no heat at the end of the sixth week.

Their first feed consisted of hard-boiled eggs chopped fine, bread crumbs, raw onion finely chopped, in about equal proportions. This was fed for the first few days, after which they were gradually weaned from hard-boiled eggs to cooked liver, chopped fine, and to a certain extent from the bread crumbs to a mixture of grain in equal proportions of bran, oatmeal and corn meal. This was slightly moistened with skim milk, care being taken to avoid *slippiness*. A little grit was added occasionally. By way of variety the onions were at times omitted, and in their place roots, sprouts or sprouted grains were used. Throughout the whole period it was endeavored to feed a food of nearly equal proportions of animal, vegetable and grain foods. After the chicks were ten days old they were induced to take exercise by feeding cracked wheat or millet seed scattered in cut straw over the floor. Good pure water was always before them.

They were fed five times daily in just such quantities as were readily consumed. The chicks were occasionally driven out into the pure air. I firmly believe that the short time required to shovel away the small amount of snow from in front of the house is amply repaid in the healthy condition of the stock.

W. R. GRAHAM, Manager.  
Poultry Dept., O. A. College.  
P. S.—I presume a charge of \$1 should be made for coal burned in warming the air in the house.  
W. R. G.

### Farm Poultry.

Many farmers are awakening to the fact that poultry-raising is of some importance, and are giving it more attention. Most farmers try to improve their flocks by exchanging males with their neighbors, which is well if they make sure of a pure-bred bird of a utility breed, and continue to use a male of the same breed. Probably the cheapest way to get into a flock of pure-breds is to buy a setting or two of eggs from a reliable breeder. Large and comfortable poultry houses are needed, but many farmers have timber of their own, and can at very little expense get material ready and build houses without any outside help. One yard should be kept for the best fowls in winter and early spring, so as to have eggs from the best for hatching the next year's chicks. The young chicks especially need a good range, as they will make quicker and larger growth, and thus the pullets will get ready to fill the basket with eggs next winter.

The farmer does not need to worry about balanced rations in summer, as his meadows, wheat and clover fields will serve to feed his hens and chicks after they are old enough to scratch. Even in the winter the farmer has little feed to buy, unless it be granulated bone or meat scraps, and even this can be largely supplied at home if he has a bone crusher. He should put away a few more cabbages, beets and turnips than the family needs for winter.

In the feeding of granulated bone, be sure that the bone is fresh. One advantage of fresh bone is that, in addition to the supplying of needed material for bone and feather growing, it supplies more or less animal food. Farmers generally feed for eggs. A good food for the production of winter eggs is corn, green foods, and warm meals. In the morning fowls should have to scratch for their food, and thus warm themselves by exercise, not by warm foods. At night they should have warm food. Gravel and grit must be provided, and the fowls should be given full access to ashes or some dust bath. Among the diseases and vices of poultry are lice, gapes, roup, and egg-eating.

**Lice** are, in nine times out of ten, the cause of all other chicken diseases. To get rid of lice, saturate the roosts with coal oil, and sprinkle the hens with insect powder.

**Gapes** is a disease caused by a small worm which grows in the windpipe. This worm must be removed, or the chickens will strangle. To remove the worm: put chicks in a box, put a hot stone or piece of iron in one corner and sprinkle a few drops of carbolic acid on it. The chicks will sneeze and dislodge the worm. Care must be taken to prevent the smothering of the chicks.

**Roup.**—To prevent roup, use a heated stone, and pour on some tar, enough to thoroughly fill the pen with smoke. You may also put a little blue vitriol in their drinking water. To an eight-quart pail of water put in a piece the size of a hickory nut.

**Egg-Eating.** To prevent egg-eating, use china nest eggs. When the vice is acquired, it is difficult to cure, and, as a rule, the only effectual cure depends on isolating the criminal, which is also necessary to prevent her contaminating others.

**Ducks.** Most farmers keep a few chickens, but only a few keep ducks. The reason for this I do not know, as I think ducks are the most profitable. There is scarcely any loss of young ducklings, even with average care.

Ducklings must have plenty to eat, and it is surprising the amount they consume. At first it seems that the cost of keeping ducks is considerably more than the cost of chickens. But when the growth is once made, a Pekin duck will not cost nearly as much as a hen. Ducks are ready for market in ten weeks, and they will command a much higher price than chickens.

Some object to ducks on the ground that they must have a creek to swim in. I believe they are better without one. A dressed duck commands a high price, and their feathers pay for the dressing of them.

**Turkeys** are not difficult to manage when one gets acquainted with their ways. They need but little feed, but it is advisable to feed them some once a day to keep them gentle. Turkeys sometimes steal away their nests. This may be prevented, however, by making a nest for them. To make a turkey's nest, put some straw into a brush pile, place eggs in nest, and drive the turkey to it; put her on it, then place a box over her. Give her feed and water three times a day, and the second day let her out. Be sure that she returns to the nest, and cover her up again for a couple more days, then let her out. She will return to the nest this time of her own accord. A turkey will take good care of her brood.  
JOHN H. ROCK,  
Oxford Co., Ont.

### How Many Males in the Poultry Yard?

C. P. Reynolds, a Michigan breeder, referring to the idea that the ratio between cocks and hens should in the heavy breeds be about one male to six or seven hens, and the lighter, non-sitting breeds, like Leghorns, one to ten or a dozen, says that during late years he has got just as satisfactory results in fertile eggs by using one healthy, vigorous male with 40 or 50 hens. The hens were of the Plymouth Rock variety, and had practically unlimited range. He therefore concludes that it would be much better for farm poultry raisers to use fewer males and better ones. The experience of practical Canadian poultrymen on this point, through the FARMER'S ADVOCATE, would be of value.

### Ringbones.

Ringbone is, in nearly every case, a serious condition, because in the great majority of horses affected with it there is more or less lameness, which is irremovable unless the lower part of the limb is rendered insensitive by dividing the nerves supplying it with sensation. Owing to the bony deposits interfering with the movement of the joints when they are situated around them, or to the pressure they make on the ligaments and tendons which are spread in wide bands over them, a cure could only be affected by their removal, and of course this is impossible. The same anatomical arrangement also explains the great pain the animal gives evidence of while ringbone is forming, and after it is fully developed. It must be acknowledged, however, that cases are seen now and then in which lameness is only slight or is altogether absent, but then the ringbone has been produced by external injury, or has been very slowly developed.

The causes of ringbone are various. In some animals, or breeds of animals, there appears to be a natural predisposition to it, this predisposition being generally related to defective pastern joints or deformed limbs. Strain on the ligaments connected with the pastern bones, and concussion from being worked on hard roads, when the horses are still immature, have, no doubt, much to do with its production. Therefore it is that it is most frequently found in riding horses which have been much travelled on roads at a fast pace while young. But it is, nevertheless, sometimes seen affecting two or all of the pasterns of horses which have only been moderately worked, and not always on hard ground, and such cases might be ascribed to hereditary predisposition. Bad shoeing, in which the hoofs are not properly levelled, or one side of the shoe is left thicker on one side than on the other, may also induce the formation of ringbone. It is perhaps oftenest seen in horses with either very long, sloping pasterns, in which the ringbone is generally at the sides, or in short, upright pasterns, in which the deposit is most frequently observed in front. The toes are also turned out or in in those horses which have a tendency to ringbone.

The lameness may be very considerable, even with a small ringbone, and not so much with a more voluminous one, this depending greatly upon its situation. When it is forming, there is much heat at the part and pain on pressure made by the finger, as well as in bending the pastern joints. The horse steps short in trotting on hard ground, and especially in turning, and is inclined to go on his toes. He always travels worst when ridden.

The prevention of ringbone is evident. Animals which have a predisposition to it, either from a constitutional tendency to throw out bony deposits about the pasterns, or have defectively-formed limbs which may favor its production from unequal bearing on the bones and joints, should not be bred from. Immature animals should not be subjected to undue strain on their limbs, particularly on hard ground, and care ought to be taken to keep the hoofs level and in a good direction, whether shod or unshod.

As for treatment, this will necessitate the intervention of the veterinary surgeon, whose skill will also have to be invoked to diagnose the existence of ringbone in most cases. It is all-important to regulate the distribution of weight on the pastern bones and joints by attention to the hoofs and shoes. When ringbone is forming, absolute rest should be given as far as it is possible to do so, for a considerable time, and the floor of the stall or loose box should be laid with some soft material, such as peat litter. Refrigerating lotions must be applied to reduce the inflammation, and may soon be succeeded by blisters, the best being biniodide of mercury, which can be repeated at intervals. The actual cautery ("firing") is sometimes resorted to, deep punctures being preferred to lines, and sometimes this is beneficial.

In cases in which all this treatment has failed, division of the sensory nerve that supplies the pastern with sensation has rendered the animal free from pain, and consequently from lameness, if the joints are not involved, but this operation, while it may render the horse useful, is not without certain dangers subsequently.

In chronic cases of ringbone much benefit may be derived from careful attention to the shoeing, as already indicated; and I have noticed a remarkable diminution in lameness follow the insertion of India rubber plates between the shoe and hoof.

In all cases of ringbone, as has been already

mentioned, important service can be rendered by the skilful shoer, who in maintaining the proper dimensions of the hoof and securing a just distribution of the weight on the bones by attending to their direction, can enable an otherwise all but useless animal to continue work satisfactorily for perhaps years.

The Construction of a Concrete Wall.

First lay a platform of lumber on the ground, about 12 feet square, beside the pile of gravel. The gravel should be clean and sharp, in size from wheat grains to goose eggs. Don't use sand, as it takes more cement and makes no stronger wall. Get a small box that will hold more than a sack of cement—that is, 80 lbs.—empty a sack of cement into the box, then take five shovels of gravel to one of cement; use the square-mouth, short-handle shovel, as it cleans the platform better than other shovels; put the gravel and cement, one to five, as described, in a pile on the platform, then turn it over, start at the one side, then turn it back again. Be sure to turn the whole pile every time, then make a hole in the center large enough to hold, say, two pails of water, then turn your shovels with the back away from you, shove the gravel and cement mixture into the water, not breaking the edges to let the water run out. After piling it up in the center as before, then turn it over once more, this time using the sprinkling can if it is not wet enough. When the concrete is wet enough, you will know by taking a handful and squeezing it in the center of the hand as you would a snowball. If it stays as you press it, it is ready for the wall; if it falls down in the hand, it is too dry; if the water runs out, it is too wet. If you get your concrete right, you will have the first part of your trade learnt. Then we will suppose you have got the foundation dug out; if not, you will dig it twenty inches wide and about twenty inches deep, four inches inside and four inches outside of your building lines. Fill this up with concrete and stone, build in all the stone you can, as long as you keep them in from both edges about two inches; after filling up this trench in this way, set up scantling any size, as long as they are long enough to go to the top of your wall, one on the inside and one on the outside. In a twelve-inch wall they would have to be eighteen inches apart, so as to allow two two-inch plank and two inch wedges; inch wedges to knock out to let plank back from wall when raising plank to build next round of concrete. If you have twelve-foot planks, put uprights six feet apart. To make the corner, take two planks and nail them together edge to side to make a square, stand this up on the outside corner, and nail braces to keep them to their places. Nail all braces to the inside of your building; they are out of the road of getting the concrete to the building. Some use bolts instead of the uprights; but for a new beginner I would advise the uprights and wedges. Then start to fill in between those planks with the concrete. Remember to ram it well; you cannot ram it too much; put in about two inches of concrete, and then lay in a row of stones in the center, remembering to have two inches from the stone to the plank. Always go around the wall in this way, and don't forget to ram well. I have been working for the Estate of John Battle, of Thorold, Ont., for some years, and will endeavor to show the total cost of work and material of some of the buildings that I have built. Take a barn 4x76, wall 19 feet high, with a 12x30 root-house at back; it took 81 bbls. of cement and \$48 to build it. This gravel, and hardened like iron. Another barn, 4x60, wall 10 feet high, the gravel very fine, not stone enough; it took 80 bbls. cement and \$40 to build it, so you will see that it is not an expensive wall for the farmer. A cubic yard of gravel will build 27 cubic feet of wall; one barrel of cement will build 30 cubic feet of wall, and one man can build 40 cubic feet of wall in a day, so you can figure up your own wall how much it will cost you, and you will bear me out that a cement concrete wall is the cheapest that you can build. The older they are, the stronger; not like other material such as lime mortar to build with, as age does not strengthen them.

Huron Co., Ont.

A New Co-operative Binder Twine Factory.

On March the 24th a public meeting was held in the town of Walkerton, Ont., for the purpose of taking into consideration the advisability of the manufacture of binder twine upon the co-operative principle. The meeting was largely attended by the representative farmers of the district surrounding Walkerton. Addresses were made by several of the farmers who were present, in favor of the project, and also by a Mr. Higgins from Montreal, who was also in favor of the scheme, and in support of it was willing to take \$10,000 stock. The meeting was unanimously in favor of the project. The factory projected was to be a building 50 by 200 feet and 16 feet in height, for the manufacture of the twine, and an addition 50 by 75 feet, for boiler and engine room and for storage of the product and raw material. The buildings are to be built of brick and in a first-class manner, and the machinery the best that can be procured, and to be a three to five tons a day plant, and is expected to be in operation in time that twine may be in the market for the coming harvest. Stock books have been opened and are being rapidly filled. It is proposed to raise \$80,000 in shares of \$10 each. Jas. Tolton was appointed Provisional Secretary-Treasurer, and Messrs. Wm. Rowand, Alex. Rae, Mal. McNevin, Adam Sigmiller, Jacob Waechter, Jno. McLean and Geo. B. Lamont were appointed a Board of Provisional Directors.

Windmill Bearings.

To the Editor FARMER'S ADVOCATE:

I was much pleased with the letter from Mr. W. J. Anderson on windmills. I have been studying up the question of farm power, and I think it would be a good idea if you could get more letters like Mr. Anderson's. Some agents try to represent to the farmers that graphite bearings are a grand thing; that these boxings won't heat if they are allowed to run without oil. Others tell us that graphite bearings are no benefit, and that there is nothing better than the babbitt boxing. If you could publish the testimony of some unprejudiced expert it would be a great benefit to the farmers who have no means of ascertaining whether the ball or roller bearings, the graphite or common babbitt is the best for ordinary farm purposes. I believe that several of the best windmill firms have discarded the ball and roller bearings. If you could publish the testimony of some experienced expert on the subject, you would confer a boon on the farmers.

Middlesex Co., Ont.

DAVID LAWRENCE.

Periods of Gestation.

At the request of several correspondents we publish the following table, giving the periods of gestation for mares, cows, ewes, and sows:

Table with 5 columns: Time of Service, Mares (340 Days), Cows (283 Days), Ewes (150 Days), Sows (112 Days). Rows list months from Jan to Dec for each category.

Delighted With Windmill.

To the Editor FARMER'S ADVOCATE:

I sometimes hear farmers asking if windmill power is a good power for a farmer. I will give my experience. A year ago last fall I had a geared windmill put up for me, a 12-foot wheel, with a mast grinder, which I think is the handiest for a farmer; at least, I would not change for a floor grinder. I can grind and pulp at the same time. I do not know how much more power it has. I have been delighted with it from the first day I used it. I have a large hopper which holds 15 or 20 bushels at one time, which I find very handy, as I can fill it up and do some chores round the barn while the windmill runs itself. It is very important that farmers should post themselves before buying, as they get taken in sometimes. I have never written to a paper before, but as I am writing to the FARMER'S ADVOCATE, I feel that I am writing to an old friend; the longer I read it the better I like it.

Russell Co., Ont.

JOHN McDONALD.

Professional Men and Their Relation to Agriculture in Canada.

It is a common feeling among men of all sorts and conditions that the other fellow seems to have the best of it. There is probably no one who does not at times come to the conclusion that his lot is a hard one. There is a deadening effect in all routine work, which, coupled with ill-health, due to injudicious care of the body, overwork, or hereditary weakness, leaves a man discouraged and depressed at times. The farmer remains fairly robust. Good health makes educational improvement easy and pleasurable. The farmer or stockman doesn't lack for exercise, fresh air, sunshine, and abundance of wholesome foods. He does not value the result of these conditions in his own health sufficiently, and may sometimes envy the man who never has to take off his coat to his work, and this envy is frequently quite misplaced. The town represents the intensest side of human effort. In town the activity of man is massed, and the individuals of the mass are in competition such as is unknown in agricultural pursuits. The uncertainty of commercial life is proverbial. Ten or fifteen years' history in towns of over ten thousand people will generally record the failure of at least half of the men engaged in business at the beginning. Professional men, too, feel strongly the pressure of duties. Canada is strongly smitten with an ideal of advanced education, so that professional pursuits are encouraged beyond the requirements of the country and beyond the capacity of the substratum of masses of people to support them liberally or even adequately. The resulting competition leads them into extravagances for the increase of social connection, and many fine professional men find themselves in a disappointing state of respectable entanglement, synonymous with semi-poverty, at the time of life in which they feel that their powers are declining and the younger fellows are crowding in to push the older men to colder and more scattered suburbs of the social circle.

Of course a man must grow old some time. He will, however, grow old slower if he will recreate more. Every man can, should and generally does indulge some hobby or side line that furnishes a healthy leaven of pleasure to the humdrum of ordinary occupation. There is no wiser thing for the tired man than to take a leaf out of the farmer's book, and there is no branch of the farmer's business more attractive and satisfactory than the livestock side of it.

The possession of land gives opportunity for the highest kind of enjoyment from constructive work and improvement under the direction of the owner. The building of fences, the construction of suitable barns and houses, the reclaiming of rough and waste places, the cultivation of fruit and flowers, making two blades of grass grow where one formerly grew, are all gratifying kinds of work. The breeding and improvement of live stock are not less so. It is one of the highest distinctions in England to capture ribbons for the champion horse, for pens of sheep or swine, or for the best calf of the year, and is in every case considered an additional honor to the highest honor in rank and nobility. Even Her Majesty vies with the gentry for honors with her herd. The speculative spirit in a new country attaches enhanced honor to occupations in which the money gains are more rapid than they are in agriculture. The application of science to agricultural, feeding and dairy operations, together with the recognition given by Governments, is raising the art of agriculture to greater dignity.

There is a good field open for men of wealth to apply surplus money to the work of improvement of live stock. This will not be done unless the indulgence in a taste for live animals becomes more general. Any venture in the business must be backed by interest and energy. The Bakewells must be men who are wedded to their art, and who have the tenacity to work for the realization of an ideal. It is probably true that no work has ever been accomplished under Government patronage equal to the work of single individuals, backed by strong personal zeal and interest. Work done by Governments must be largely done by servants, and so must lack the life and soul of individual effort. Since stock interests would certainly be helped by the enlistment of greater interest on the part of the professional classes, a professional man would make a poor living if put in the average farmer's shoes and obliged to make a living with the same resources. But with an interest in live stock and considerable capital, the professional man, with the susceptibility to new ideas that the professional classes are generally credited with, he should be able to confer benefits on the agricultural profession and bring benefaction, honor and gratification to himself and his family. There is in Canada a rather strong tendency on the part of young men who are the sons of farmers to enter the professions. The fact remains that agriculture is the representative occupation of the Dominion. It involves, directly or indirectly, about three-fourths of the whole population, and on account of its predominance it should be expected to assimilate other factors of population to it, and to more closely identify the interest of these factors with itself. The tired professional man, by embarking in land or live-stock ventures, will be recreating in the best possible way; the rich one will be promoting his country's good, and will be identifying himself with the best, foremost, representative interest and business, his land.

**The Dairymen's Outlook.**

The Canadian farmers who make a specialty of dairying have had an exceptionally good season during the last six months, and especially so in those districts in which the supply of home-grown stock food was abundant. In those sections which suffered from drought last summer, necessitating early drafts upon the supply of winter fodder and the use of purchased foods to a considerable extent, dairymen failed to reap as great a benefit from the steady run of good prices for butter and cheese, but on the whole the situation has been favorable, and the prospects for continued strong prices are certainly encouraging. Cheese continues to rule high as the result of a short supply with a strong demand, and the outlook for that product has not for years been more roseate. The market for good butter has maintained a steady run at fairly good prices, and though for a few weeks during the flush of the pastures it may be expected that values will decline to some extent, yet the experience of buttermakers in the last few years has shown that as a rule the flush is for but a short period, and that the cheese factories and the city trade absorb so large a proportion of the milk supply that good butter seldom goes begging for buyers at a fair price even in the summer months. The unusual buoyancy of the cheese market the present season will naturally react in favor of the buttermakers, and a survey of the whole field would appear to justify dairymen in putting on full sail in anticipation of a good time coming.

The breeders of cattle of the dairy breeds are finding an active demand for good stock, and report numerous sales at satisfactory prices, while the increased attention being given to the character and quality of the cows kept, as well as to the best methods of feeding with a view to economy of cost and development of capacity for producing milk and butter at a profit, is, we believe, steadily raising the standard of the dairy cows of the country. It is true there is yet much room for improvement in this regard, both by weeding out unprofitable cows and by better feeding, as well as by breeding from selected sires of approved type, descended from proved stock of superior capacity. There is no more intelligent or progressive class of stockmen in the country than the breeders of dairy cattle of the various breeds, and none who are doing a safer or more profitable business. They have, as a rule, set their ideals high, and are working with a steady purpose towards improvement, in which they are making steady progress. Breeders are coming to a more general agreement as to the ideal type of dairy conformation in that class of cattle, a type in which utility and beauty may be happily combined with a strong constitution, which goes far towards ensuring capacity for profitable production. We confidently anticipate a distinct revival in the demand for good bulls of all the dairy breeds the present season, and an advance in values of the better class of both males and females. The present number of the *ADVOCATE* presents an unusually interesting bill of fare for dairy farmers in the many excellent articles on various phases of the industry, in the stock and dairy departments, to which attention is invited.

**Wonderful Strides --- Super, Not Sugar.**

I find the question department of the *FARMER'S ADVOCATE* very instructive, and am sure if I were engaged in farming it would be most helpful. A friend of mine, in writing, says he is taking your paper and thinks it has made wonderful strides even since last fall. I am sure I enjoy reading the paper, even though not a farmer.

In my article, page 248, the printer has committed a grievous error when he makes me say "transfer the *sugar* from the parent hive, and the new swarm will continue its unfinished work." The *super*, which I meant to say is to be transferred, contains nothing stronger than honey, or my father's long struggle for a pure honey law would come to naught. I hope you will make a prominent correction of this, as the conclusion of the sentence might easily be construed to carry out the idea of *sugar*.

MORLEY PETTIT.

**QUESTIONS AND ANSWERS.**

**Veterinary.**

**NAVEL ILL.**

This disease is due to a germ penetrating the navel wound. The germs might remain local, but their poisons were absorbed from the wound, and could give rise to serious systemic disturbances, including pain in the joints. When the pus germs gained the wound, as frequently happened, they spread up the clots in the vessels of the cord, and they might gain general circulation in this way. When this happened, pyæmia—that was to say, innumerable small abscesses were formed in the important organs, the germs having been carried to them by the blood stream. The germs might also cause inflammation of the joints. This was one of the principal symptoms. It was called navelill and joint ill, the two, in fact, being bound up a good deal with each other. The best method of prevention was to disinfect the navel wound almost immediately after birth. Dry antiseptics were best for this, because they stuck to the wound for a longer time than solutions. The cord should be tied or ligatured. This prevented germs gaining access to the clots, and in a fortnight or so

the vessels of the cord were so shrunk that they were almost converted into fibrous cords. Along these the germs would not penetrate.—*Prof. Stackman, of Edinburgh.*

**Miscellaneous.**

**DRAWING WATER FROM WELL 50 RODS FROM BARN.**

ENQUIRER, Glendale:—“Can you or any of your readers give me information on the following points: Can water be drawn by a windmill placed on the barn, supposing the well is fifty rods from the barn? My well is only twelve feet deep, and contains sufficient water for a large herd of stock. The ground is about level from the well to the barn, or to within about four or five rods of the barn. Now, by laying tamarack piping underground, can the water be drawn by a windmill and elevated into a tank say from 15 to 20 feet from the bottom of the drain? If so, would I need to place valves in the piping, and what distance apart? In supplying water from said tank to water cups in cattle stalls, will a float stop the supply as soon as the cup is full? In laying the piping from well to barn, would ups and downs in the pipe make any difference in the delivery, or would it need to be perfectly straight from end to end? If the piping was extended on past the barn to the house, could arrangements be made so that by stopping the supply into the tank in the barn the water could be forced along by the same windmill to the house and elevated say about 20 feet from bottom of the drain? The piping, of course, would need to be under frost mark. Would piping need to be filled with water before windmill would bring the water? If so, when would be the best time to fill it, and from where would it be easiest to fill, and what size of a windmill would it require?”

Yes, a windmill could do the work required. It would probably be best to use a 12-foot wheel. Have force pump at well, using a pump-jack with sheave pulley, or an arrangement called pumping gear and triangles might be used in your case. The windmill manufacturers (see our advertising columns) will gladly furnish you with illustrated pamphlets and full particulars as to the best outfits, prices, etc. Iron piping 1½ inch would be preferable to wooden piping. Of course, it should be laid below frost and should be straight, a little lower at one end than at the other, so that it would drain out when the pump was stopped. Arrangements could be made for forcing the water into the tank at house as well as in barn.

The patent watering cups for stock can be arranged with valves to cut off supply when full. A good many advanced stockmen, however, prefer continuous water troughs to the individual cups, as it is claimed the latter are liable to get out of order, and become polluted, whereas the open trough can be readily cleaned out.

**SEEDING A RAVINE WITH BROME GRASS.**

W. T., Turtle Mountain:—“I would like to be informed as to the best method of treating a piece of ground I have which I want to seed down to Brome grass. It is a ravine flat, with a fairly good sod and some scrub. Would you advise breaking middling deep, then in about three weeks to disk it, and then sow the Brome grass seed? Or would you advise to take a crop of grain off it first, in order to kill the native grass?”

[Unless it is desired to have the land at once in Brome grass, a good plan is to break during the month of May, backset before harvest, and thoroughly disk in the fall. Follow this next year with a grain crop, and by the time it is taken off the sod will be thoroughly rotted and all the native perennial weeds destroyed; then plow the stubble in spring and sow the grass seed. This generally gives the best and cleanest crop of Brome. Where it is desired to seed the land down to Brome as quickly as possible, the Brome grass can be sown directly after backsetting, early in August. Good pasturage will be obtained then the first fall. There is always danger, if this plan is adopted, of native perennial weeds taking possession of the land and driving out the Brome grass, especially if sunflowers and artichokes are found naturally on the land.

S. A. BEDFORD,  
Supt. Exp. Farm.]

**CRIBBING HORSE—COW WITHHOLDING HER MILK.**

A SUBSCRIBER, Norfolk Co., Ont.:—“I have been reading the *ADVOCATE* since the first of last January, and have received many useful hints, as well as much valuable information. The *ADVOCATE* should be in every farmhouse.

“1. Now can you tell me, is there any cure, or what will stop a horse from cribbing or sucking wind?”

“2. Will it interfere with a cow letting down her milk, to feed her chop stuff while she is being milked, or should she be milked first?”

[1. Cribbing or crib-sucking is a habit of grabbing the manger or other objects with the front teeth, and is usually associated with the serious vice, of wind-sucking, which often leads to digestive disorders, colic, and loss of condition. The horse seizes the manger or other solid object with his teeth, arches and shortens the neck, and makes a grunting noise. The habit is frequently acquired during idleness or from soreness of the front teeth. When first noticed it is well to place the horse in a box stall that has no manger, rack or other object to take hold of. Allow him to take his hay off the floor and his oats from a pail, which should be removed

as soon as the meal is finished. Have his teeth examined and dressed, if necessary, by a veterinary surgeon. If the horse is a confirmed cribber put a muzzle on him and leave it off only while he is eating or on the road. In pure wind-sucker, a strap may be buckled tightly around the upper part of the neck, though at the risk of inducing roaring.

2. The writer has frequently found it of advantage to give a cow, that inclines to withhold her milk, a feed of chop or other food that she relishes, just before sitting down to milk. This treatment may not work with all cows, but we have seen none but great results from it. Kindness and quietness at milking time will be found to pay.]

**WILL GUINEA FOWL PROTECT POULTRY?**

ENQUIRER, Bradbourne, Alta.:—“I see in your issue of 5th inst. that I. B. Powell, East Assiniboia, recommends keeping guinea fowl to prevent hawks, wolves and foxes carrying off the poultry. Will you kindly, through the medium of your paper, let me know if other readers have had the same experience? 2. Where can a setting of guinea fowl eggs be obtained? 3. Up to what age can Pekin ducks be profitably kept?”

[1. We shall be pleased to publish the experience of others as to the ability of guinea fowl to protect poultry from wolves, etc.

2. See our advertising columns.

3. Pekins are probably at their best up to two years old; after that, they lay fewer eggs, and unless of extra good individual quality, it will hardly pay to keep them longer.]

**GEESE TO ONE GANDER.**

J. C., Ridgeville, Man.:—“How many geese ought to be kept for one gander?”

[In Toulouse geese, the gander mates with one goose, and will accompany that goose to the nest while laying, and during sitting will sit near and watch and protect it from any threatened danger. It will allow one or two other geese to accompany it, and will serve them, but does not sit with them or protect them. To insure fertile eggs, ganders should be mated with geese several months before laying time, but if there are no other ganders near, he may take to the geese at once.

M. MAW, Winnipeg.]

**PREVENTING MOLD IN MILK HOUSE.**

A. H. C., Kelowna, B. C.:—“Can you tell me how to apply formalin to walls (wooden) of a milk house to prevent mold forming, and if it will do this?”

[A solution of 2 per cent. formalin will prevent mold if sprayed upon the walls or put on with a brush same as whitewash. Common whitewash is also very good. Another good solution is 1 ounce bluestone to a gallon of water, either sprayed or put on with a brush.

C. A. MURRAY,  
Provincial Dairy Superintendent.]

**Chatty Stock Letter from Chicago.**

FROM OUR OWN CORRESPONDENT.

Following table shows current and comparative live stock prices:

	Extreme prices now.	Top Prices		
		ago.	1899	1898
<b>Beef cattle.</b>				
1500 lbs. up.....	\$5 15 to 5 80	\$5 05	\$5 35	\$5 25
1350 to 1500 lbs.....	4 90 to 5 50	5 00	5 50	5 25
1200 to 1350 lbs.....	4 75 to 5 50	5 50	5 35	5 20
1050 to 1200 lbs.....	4 55 to 5 15	5 40	5 25	5 00
900 to 1050 lbs.....	4 30 to 4 70	5 25	5 00	4 85
<b>Hogs.</b>				
Mixed.....	5 10 to 5 37½	5 75	3 97½	4 17
Heavy.....	5 10 to 5 40	5 75	4 05	4 20
Light.....	4 95 to 5 30	5 65	3 95	4 10
Pigs.....	4 00 to 5 00	5 40	3 80	4 00
<b>Sheep.</b>				
Natives.....	4 00 to 5 75	6 00	5 25	4 60
Western.....	5 50 to 5 70	6 00	5 20	4 25
Yearlings.....	5 60 to 6 20	6 25	5 25	4 60
Lambs.....	4 50 to 7 40	7 15	6 10	5 50
Colorado lambs.....	7 00 to 7 40	7 40		
Spring lambs.....	8 00 " 10 00	9 00	12 00	8 00

The demand for young cattle to feed is very strong. Buyers have been paying as high as \$7 per 100 lbs. for young steer calves averaging about 115 to 160 lbs., on the Chicago market. Canadian store cattle continue to command attention, and buyers in the West do not seem to be able to get enough of them. They are going into Ohio, Indiana, Michigan, Illinois, Missouri, Iowa, Kansas and Nebraska. They are well bred in the main and thin enough in flesh to be only attractive to those who want them for feeding purposes.

The advance in the price of cattle on the English markets is very encouraging just now to American shippers. The prices for good cattle here have been comparatively low, and it is expected that there will be a liberal marketing of heavy weight cattle during the next month or so. The general situation in the export trade is pretty encouraging on the whole.

Since Argentine has been scheduled by Great Britain there is talk of bringing the boats north to carry live stock from this country and Canada to England. There has been a great improvement in the South American vessels during the past few years, but they are still very inferior to those our exporters are accustomed to ship in. Furthermore, it is doubtful if exporters will want to take chances in sending stock in ships that have carried cattle affected with foot and mouth disease. It is possible that a thorough disinfecting will make them perfectly safe, but until shippers can be assured of this they are not likely to be generally patronized.

An idea of how closely cattle dealers figure sometimes is shown by a recent transaction in which a train load of cattle sold at \$5.50 to \$5.60 on the market. A cattle shipper bought \$20,000 worth of cattle and marketed them within three days, and when all expenses were paid he was just \$2.17 to the good. That is figuring mighty close to the disappearing line of profits.

The buying of pure-bred bulls is not being confined to men who raise cattle for fancy breeding purposes. One of the hopeful signs of the times is the fact that breeders of ordinary beef cattle are conspicuous among the buyers of pure-bred bulls of the beef breeds.

**Electricity vs. Steam.**

Armour & Co., of Chicago, at a cost of nearly half a million dollars, have just substituted electricity for steam as a motive power in their great packing establishment, and expect to effect a saving of fully one-half fuel expense and more than that in labor.



The Mutiny of the "Helen Gray."

BY GEORGE MANVILLE FENN.

(Continued from page 252.)

"Barque Helen Gray seized by Malays. Captain and crew murdered. Captain's wife, child, and two men left. Up winding muddy river by round-topped hill. Help!"

I thought that would do, and rolling up the paper, I let it go down the neck of the bottle, and was about to cork it up tightly, but it struck me that if a bottle were seen floating it might not be noticed, and I had to think out how I should act.

It did not take me long. I set my knife to work and split off a skewer-like bit of wood from my bunk, pointed one end, and made a slit in the other, into which I stuck a piece of paper from my notebook; so that after I had well corked the bottle, and stuck in the pointed piece of wood, I knew that if the fish and crocodiles left that bottle alone it would go floating down the river and out to sea like a buoy, and some vessel might pick it up.

It seemed an age before I heard the chain cable rattle and felt the way of the vessel checked. Then, waiting patiently for about half an hour, I put my head above the hatch and listened, meaning to wait till I could creep on deck with what I called my life-buoy, and drop it gently over the side. I knew there would be someone on the watch, but I could not tell where; and as I listened, there came from out of the dark jungle close at hand a deep snarling roar, which I felt could come from no other creature than a tiger, and my heart sank as I felt how impossible escape would be that way. We must either steal down the river in a boat or wait for help. At least there was another way—for my messmate to join with me in killing the Malays as they had killed our men.

I stood there waiting for my chance, but as I waited there came a splash from the river here, and another there, evidently made by big fish, and feeling satisfied that a splash more or less would not be noticed, I raised the bottle and held it above my head for a few moments, then hurled it bottom forwards with all my might.

"If that strikes a rope it will fall upon the deck," I thought, but the next moment I heard a loud splash, and feeling that I had sent one messenger to fetch us help, I went below.

As soon as I woke the next morning I lay down with my back in the light shed by the hatchway, and wrote nearly the same words upon leaf after leaf of my little notebook, doubling them afterwards so as to be ready to tear out when wanted; and my next thought was how to get some more bottles.

When I went on deck Ismael gave me a friendly nod, and pointed to the provisions on the end of a tub, and my heart rose as I saw a wine bottle and another evidently empty at the side.

I made no scruple about helping myself, and taking the empty bottle, poured some wine into it, then carrying my food on the poop-deck, sat down to eat and drink.

Feeling that the best thing I could do was to affect the utmost unconcern, I asked Ismael for some more wine, and to my horror he led me to where the carpenter's tools were, and bidding me take hammer and chisel he went down below to where the hold had been opened.

"Take all you want," he said, pointing to one of the cases of wine stowed in a stack.

I broke open the case and took out two bottles, trembling all the while lest Joe Stacey should be discovered.

That night at the change of tide I sent a champagne bottle whose contents had been poured away floating down with another message; and an hour later I started another, while without any difficulty, the man who saw me go taking it quite as a matter of course, I went boldly, loaded myself with meat and biscuits, and I carried the stores to the fore-cabin hatch.

Just as I got there though, Ismael confronted me and asked me sharply what I was doing. I showed him, and he was quite satisfied and walked away.

These journeys to and fro taught me one thing, and that was that the Malays who seemed to be noticing nothing were always on the watch and ready to start up out of the most unexpected places.

This was brought home to me on my walking to the hold and going down where the open case of wine lay waiting. I had taken two bottles away and to my great joy I found another had gone.

Joe must have taken this, for I had not seen the Malays come down, Ismael having had a case placed in the cabin for their use.

I had not come down empty-handed, for I had a tin of preserved meat and biscuit with me, and these I laid on the open case, saying aloud:

"Meat and biscuit and wine with plenty of water would keep us three alive a long time."

"Yes," said a low voice close behind, and a shiver ran through me. "Don't drink too much. The prophet forbids wine."

"Oh, I won't take too much," I said, "but I don't want to be always having to come down here."

As I spoke I took two more bottles by the neck and moved towards the ladder; and to my great delight Ismael, for it was he, followed me without a suspicion.

Twice over that night I tried to put my fresh plan in force, but each time I went on deck smoking I found that there was someone on the poop-deck, and though I tried again and again, there was always some dark figure to be dimly made out against the sky.

During three days we slowly drifted up with each tide and thrice at each change I sent wine bottles floating down, each with its well-corked-in message and its flag-like signal stuck in the neck, while the greater part of the day following I spent leaning over the side, anxiously watching the returning tide in an agony of dread lest one of the bottles should come floating back and be noticed by the Malays.

But not one hole in sight, and on the fourth night as we lay at anchor, I sent out with the stream no less than a dozen bottles, the contents of a case I had managed to empty down in a corner where the wine soaked away, wondering the while at my success.

All my paper was used now, and, feeling that if these messages were to do any good I could let them rest and wait, I made up my mind to have one more try to put my other plan in force.

My plan was to go on the poop-deck armed with a knotted rope which I had, and, making one end fast to a belaying pin or ring-bolt, to lower myself down over the stern opposite to the cabin window.

"And if they hear me I shall get a thrust from a kris, full over into the river; and the crocodiles will make short work of me. Never mind, I'll risk it," I said to myself, and as we were gliding up the windings of the river, I tried to make my way on to the poop-deck, but two of the Malays were there and awake, and after being nearly caught twice over, I determined to try instead and get word with Joe Stacey; but even here I failed, for all below seemed to be still as death.

My feelings may be imagined next morning when I went on deck to find that we were in a wide lake, like opening which seemed to mark the extent of the navigable part of the river, for away to the right there was the rushing noise of falling water, and the stream that had been so oily and sluggish was now rippled and fast.

I saw now the object of our journey. At this, the tidal end of the river, there was a collection of palm-thatched houses and what seemed to be a stout stockade of bamboos, while in a shallow part where some rocks projected from the bed of the river, there were the remains of a large prahu which looked blackened as if it had been burned.

But there was no sign of living being; and by degrees I saw that the place was deserted. That this was our destination it was plain enough to see, for our anchor was down, and under Ismael's direction the smallest anchor was lowered into the boat which they had drawn alongside, and this was carried some distance astern to cast into the river so as to effectually moor the vessel free and aft.

The boat was about fifty yards away, with four men in her, while Ismael and the other ped out the rope from the stern, and I looked on thinking that if I had been armed, and with Joe Stacey by my side, how easy it would have been to beat these two overboard and keep the others off. Then we had but to cast off the chain cable and float back with the falling tide.

"Why couldn't I do this alone?" I thought to myself as I looked round for a capstan bar, but to see in a despairing way that they were all forward.

The next moment the chance was gone, human feeling, I suppose, driving it out of my head. For there was a shout and a splash, and as it were an echo of the first. The anchor had been cast out of the boat, but one of the men who lifted it out overbalanced himself and made a spring to avoid being dragged down. The consequence was that he plunged in several feet from where the anchor sank, and the boat went in the other direction.

As the men seized the oars the head of the Malay rose to the surface and he uttered a laughing cry as he struck out for the boat, but the next moment his eyeballs gleamed white in the sun, his face was horribly distorted and he uttered a yell of agony, throwing up his arms wildly and then shouting again and again, the last cry being a smothered gurgle as he was dragged under water.

Then all was still and the river flowed on. It was a shriek from the cabin window and a wild sobbing cry of horror which brought me to myself.

"Come on!" I shouted to Ismael as I made for where one of the boats swung from the davits. But, looking cold and strange, he laid his hand upon my arm and shook his head.

"No," he said; "Kismet: the mugger has taken him."

I stood there shuddering and searching the surface with my eyes, but just as a duckling or water-rat is snatched under by a pike in some pool or stream, the poor wretch had gone, and his comrades rowed hastily back to the ship's side, climbed on board, and made the boat fast by a rope.

Finally they tightened one cable to fast moor the vessel, and a couple of stout ropes were taken ashore to make secure to as many tall palms, the men working in a calm stolid manner, the only evidence of their being startled being shown in the silence with which they did their work.

CHAPTER VII.

Here then was the object of the Malays in seizing the ship and bringing it up this out-of-the-way river. The old deserted camp must have been known to some of them, and after waiting for an opportunity to rise against those they served, these men had seized what was to them a treasure of uncounted value.

Feeling that patience was my only chance, and that I should win the Malays' confidence by taking my position as a matter of course, I set to work with them in all they did, helping them to cut down bamboos and to spread the great palm leaves for thatching the largest house, after the ladder up to its bamboo platform, eight feet above the ground, had been mended; and as soon as this was ready the various stores of the ship were attached.

The first things sought for were the cases of arms and the ammunition, a large proportion of which was stowed in the repaired house, rifles and pouches of cartridges being ranged on either side of the door and windows.

Then the wine and provisions were landed, and each day as the men went to and fro with boatloads, I was in dread lest Joe Stacey should be discovered. But my alarm had been unnecessary; stores of provisions which I had left in the neighborhood of the water tubs disappearing regularly, but all the same I could not make out Joe's hiding-place.

I found out now that when we were busily engaged ashore and out of reach Mrs. Barton was allowed to leave her cabin and walk about the deck, but long before the time for our return on board she was locked up again, and I used to chafe and spend my time thinking out plans for sending her a hopeful message. But I thought in vain. I was dealing with people more than my match in cunning.

I was seated on deck, forward, one evening, thinking over again of the possibility of getting one of the boats beneath Mrs. Barton's cabin window and taking her off, when the idea came.

I have said that it was impossible to get from my berth in the fore-cabin to Mrs. Barton's cabin, for either Ismael or Dullah was always close handy to the steps leading up to the poop-deck, and I dared not attempt travelling from mast to mast by the stays, for the vibrations would certainly give warning on whose still nights; but now there seemed a way and I wondered I had not thought of it before.

As I stated, two stout cables had been run ashore from the head and stern of the vessel, and these answered the double purpose of mooring and of keeping her upright when the tide was low and the keel touched the ground. At such times the barque hung away from the shore and these two cables were drawn exceedingly tight, but not enough to part, for the big palms to which they were attached high up gave like a couple of natural springs. So, seeing my way now quite plain, I tried to realize another idea, that of getting speech with Joe Stacey.

That seemed in vain, and, full of excitement, that night I went down into my berth meaning to wait till quite late, after satisfying myself that the stern rope passed as near as could be over Mrs. Barton's cabin window.

I had not been below in the fore-cabin long when I was startled, for there was a faint tap on the bulkhead down close to the floor.

It was repeated. Eager and wondering, I crept to the spot on hands and knees, and taking out my knife I gave a slight tap on the bulk-head.

It was repeated directly from the other side. I struck twice in quick succession and there were two taps. Then I gave two more, waited a few moments and gave another.

They were answered in the same way, and, full of excitement now, I opened the small blade of my pocket-knife and began to bore a hole. But before I had much more than begun, I heard a familiar sound—that of an auger, and in a few moments the steel came through, was withdrawn, and a voice whispered—

"Is it all right, lad?"

"Yes, Joe, yes. Talk low. Are you all right?"

"Rather sick of it, lad. Thought I should never get to you. Think I may go on and get out a board?"

"Yes. No one comes down here."

"Thank goodness!" he said; and setting to work with the auger, making hole above hole, which I connected with my knife, before morning we had got out a piece of the bulkhead sufficiently large for him to creep through. And then, utterly worn out with the exertion and want of air, he told me how he had been at work for days and days trying to tunnel to me, and succeeded from the fact that it was here that a quantity of machinery was stowed openly because of its weight, that he was able with great exertion to creep along in and out; but more than once getting so wedged in that he was afraid he would have to call for help.

"It was hard work that night," he whispered to me. "They somehow managed to lure the chaps up one at a time, and then it was the knife and overboard almost before they had time to call out. I hardly know how I managed; sudden twist round and a dodge from them in the darkness, and as they were after me I made a bit of a jump, caught hold of the shrouds, and swung myself up. Then just as I could hear them run under me there was a big splash in the sea, and they stood looking over the side whispering, and I s'pose they thought it was me. You know all the rest," continued Joe, "but there's been times, mate, down below there, when I felt as if it would have been better to have been killed than buried alive as I was."

"But you got the food I put for you?"

"Oh yes, lad, that was all right, and there was plenty of water. Five of 'em, eh? And we're two. Well, if we can take 'em two and a half and two and a half I'm ready. Feel as if a fight would stretch me and do me good. What do you say?"

"Why not provision one of the boats, get Mrs. Barton and the child on board, and trust to that?"

"No, thank ye, lad. I've done it; I was once nine days at sea with twelve men in an open boat. Very fine and brave to talk about, but of all— There, kill me right off if you like, but no open boats. I'm for a fight. But, I say, haven't you had word with the skipper's missus?"

"Not a word. I am going to try and get speech with her to-night," and I told him my plan.

"The boat is swinging by the painter, I feel sure," I whispered. "I'll go and warn her while you run the boat round under the stern. I would lower them both down to you, and we could escape in the darkness."

"No, you couldn't, lad. They're too artful to leave a boat ready for you to get away so easily. How do you know that there aren't a man sleeping in it? No: it will have to be a fight. And that's what I should like: it's what they deserve."

"Never mind what they deserve," I whispered, angrily, "we have to save that poor woman and the child, and—"

I caught him by the arm, for there was a soft movement on deck which my ears had grown quick at detecting, and I could even hear a faint breathing as someone came and listened at the hatchway.

The Malay stopped listening so long that, in dread lest he should descend, I muttered uneasily as if in my sleep, turned so as to make a slight scuffling noise, and sighed.

The ruse was successful, for there was a movement on deck, and we two sat listening in silence for about half an hour before I ventured to place my lips to Joe's ear, and whispered what I was about to do.

"Think you can manage it, lad?" he said.

"Yes."

"Go on, then, but take care. It will give her ease, poor thing. But if they see you, give a good loud whistle, and I'll be with you. We must be good mates now."

I left him and crawled on deck, fully determined to make an excuse if I was caught, and not betray Joe to what I knew would be death. If I met my own—

"God forgive me!" I said to myself, "and may they at home never know."

I crept up to the hatchway, and found it darker than ever. There was a heavy mist, but it seemed to be floating above where I stood some ten or twelve feet, so that not a gleam of light came from the sky. All was still as death on deck, but splashing and now and then a heavy blow on the water came from the river, while from the dense forest there were curious sounds, and once a low deep roar, which sent a shiver through me. At the moment I began to act I felt as if my nerves were like steel.

I crawled out of the hatchway and crept under the star-board bulwark, to lie listening for a few minutes before raising myself up and going aft a little, with my hand raised to run along till I felt the mooring cable, which was strained tight. Then, after pausing a little longer, I grasped it with both hands, threw first one and then the other leg over it, and began travelling silently along with my head towards the shore.

It gave a little, but not much, and I found that I could get along almost without a sound, but as I went work which took all my energy to be calm and cool, for as I crept along, hanging by hands and legs, I could hear splashing in the water beneath me, and in imagination I could picture a couple of loathsome reptiles with their gaping jaws watching me, and preparing to make a snap and drag me down.

There was the knowledge, however, that I must be at least a dozen feet above the surface to comfort me; but the cable gave more and more, and I was going down for a time, but not for long, and my spirits rose again as I found that I had begun to ascend, till my head came in contact with the palm tree to which the great rope was secured.

I let my legs sink down, and hung for a moment before swinging round and clasping the trunk with my legs, for I dared not drop. Directly after I was on the ground trying to make sure of my direction in the intense darkness, and, finding a fresh difficulty, for I could not be sure of hitting on the fellow tree.

I started off, though, taking step by step with the greatest caution, believing the while that I was going parallel with the barque, but with the confusion of darkness upon me, and my dread filling the space before me with slimy reptiles from the river on my left, and sleek, savage, cat-like creatures from the jungle on my right.

It was not the length of the ship that I had to traverse, and before long I knew that I must have gone that distance and more, but there was no tree; and though I took a few steps to right and left I could not find it, and with the mental confusion increasing I stood still in despair, when a loud slap on the water from behind told me that I must have gone away from the river. Turning quickly the next moment I stumbled against a bush, and felt that all was over, for to my horror and astonishment the bush flamed up in a scintillation of sparks. I had disturbed a colony of fire flies, and I stood waiting to hear voices on board. Then the sparkling died out, and it was dark once more.

But all was still. My hopes returned again, and I took a few more steps to my left, for the curious phosphorescent light of the fire-flies had dimly shown me a tree trunk, and knowing that there could not be another near, I went on with outstretched hands and directly after touched the tree.

I breathed more freely as I clasped it, climbed up a little way, and found the other cable, along which I began to crawl, but feet forward this time, till I judged that I must be close to the ship.

It was so, for my feet touched it, and I hung there listening for a sound, even if it were the breathing of watcher or sleeper, before lowering my legs, and then going hand over hand, to stop short, as close to me I heard a low, catching breath, and in a hoarse whisper came the words out of the black darkness with an intensity that was horrible—

"Keep back, or I'll kill you!"

I tried to speak, but for some moments perhaps it was but one, and the excitement seemed to lengthen the time—I couldn't get out a word, but hung there expecting the blow of a knife or the shot from a pistol to make me drop into the power of the hideous reptiles swimming below. Then my tongue seemed loosened.

"Hist! Mrs. Barton; a friend."

"No! I have no friends here; I am armed. Keep back if you value your life."

"Woman, are you mad? I whispered. "It is I—Roberts."

"Yes, the friend of those wretches."

"Their prisoner," I said. "Hush. For little Lyddy's sake trust me."

She uttered a sob, and her voice changed as I felt her hand clutch me by the shoulder, and a knife fell upon the cabin floor.

"Yes, yes," she whispered. "You are an Englishman. You could not be so base."  
"Hist, let me come," I whispered; and swinging my feet forward, felt the open window, and the next moment I was in the cabin, to listen, but all was quiet.

[TO BE CONTINUED.]



### Are There Two?

A bad little boy with a cross little face  
Came slowly downstairs in the morning;  
Of fun or good nature he showed not a trace;  
He fretted and cried without warning.  
He'd not touch his breakfast, he'd rather not play;  
If you spoke, he just answered by snarling;  
He teased his pet kitty, and all the long day  
He really was "nobody's darling."

A good little boy, with a bright little face,  
Came down in the morning-time singing,  
And indoors and out, and all over the place,  
His laughter and music went ringing.  
He ran grandpa's errands, his orange he shared  
With Sue; and he found mamma's thimble,  
To do what was asked he seemed always prepared,  
And in doing it equally nimble.

These two little boys that I've told you about,  
Though they live in one house, are not brothers;  
The boy that can sing and the boy that can pout  
Have not two loving fathers and mothers.  
There are two kinds of tempers, and only one boy,  
And one is indeed such a sad one,  
That when with the good one he brings us all joy,  
We ask "was he really the bad one?"

### How Would You Like It Yourself?

There was a great commotion in the back yard.  
Mother hurried to the window, to see Johnny  
chasing the cat with stones.

"Why, Johnny, what are you doing? What is  
the matter with kitty?" she asked.

"She's so dirty, mother. Somebody shut her up  
in the coal hole," he said.

"And is that all?"  
"Why, yes," said Johnny. "She's dirty  
and black and horrid! We don't want her  
here."

Mother was about to speak, but she  
checked herself and went back into the  
house. Presently Johnny came in, crying,  
and ran to her for help. He had fallen into  
a puddle, and was dripping with mud.

"Oh, mother, mother!" he cried, sure  
of help from her.

"Jane," she said quietly to the nurse, who  
was sewing, "do you know where there are  
any good-sized gravel-stones?"

Nurse looked up, astonished, and Johnny  
stopped his loud noise to stare.

"Stones, ma'am?" asked Jane.

"Yes, to throw at Johnny. He's been in  
a puddle, and is dirty and black and horrid.  
We don't want him here."

Johnny felt as if this was more than he  
could bear, but a funny smile on his  
mother's face kept his heart from being  
quite broken.

"Please, mother, I'll never do it again!" he  
cried. "Poor kitty! how sorry she must have felt  
when I threw stones at her."

Johnny was then washed and comforted, but he  
did not soon forget the lesson he had learned of  
doing to others as he would have them do to him.

### A Smiling Face.

Does anyone like a drizzling rain  
As well as a sunny sky?  
Does anyone turn to a frowning face  
If a pleasant one is nigh?

Oh, give us all the look that springs  
From a kindly nature's grace!  
We do not care if he's dark or fair—  
The boy with a smiling face.

Does anyone like a lowering cloud  
As well as a shining light?  
Does anyone have power to please  
Like a laugh that is sweet and bright?

Oh, the girl that is gloomy, with fretful scowls,  
Though she dresses in silk and lace,  
Hath never such art to charm the heart  
As the girl with the smiling face.

Dear boys and girls, remember this—  
You are apt to meet with loss,  
No matter what thing you undertake,  
When you're sullen, and sour, and cross.

Dear boys and girls, I would say it thrice,  
'Twill help you in every case;  
If you'd win success and the world would bless,  
You must wear a smiling face.

### Blowing a Horn.

A little four-year-old was taken on a visit to  
grandmamma in the country. There, for the first  
time, he had a near view of a cow. He would stand  
and look on while the man milked, and ask all  
manner of questions. In this way he learned that  
the long crooked branches on the cow's head were  
called horns. Now the little fellow knew of only  
one kind of horn, so hearing a strange bellowing  
noise in the yard, he ran out to ascertain its  
cause. In a few minutes he returned, exclaiming:  
"Mamma, mamma! Oh, do come out here! The  
cow's blowing her horns!"

## THE QUIET HOUR.

### Working for God.

"Thy servants militant below  
Have each, O Lord, their post,  
As Thou appoint'st, Who best dost know  
The soldiers of Thine host.  
Some in the van Thou call'st to do,  
And the day's heat to share;  
And in the rearward not a few  
Thou only bidd'st to bear.  
A brighter crown, perchance, is theirs  
To the mid-battle sent;  
But he Thy glory also shares  
Who waits beside the tent;  
More bravely done, in human eyes,  
The foremost post to take;  
The Saviour will not those despise  
That suffer for His sake."

You wish to work for God, and you see plenty of  
work to be done in the world; is it then only  
necessary to plunge in and do anything you like?  
If all the workers were to act in this way, just think  
what confusion would be the result. Could a  
farmer work his land in that haphazard fashion?  
If he had half a dozen men to do the work—we will  
suppose them to be young, untrained men, just out  
from England to learn farming—and told them  
there was plenty of work to do, they could please  
themselves what they attempted. Think of the  
state of the farm after a few months of such un-  
trained industry! Would the animals be fed regu-  
larly, would the plowing and seeding be done at the  
proper time, would the cows always be milked?  
When it was time to do the harvesting the men  
might be sawing wood for next winter, or painting  
the house.

But there is no need to illustrate farther. We all  
know that where a number of people are working  
together, and there are a great many things to be  
done, there must be someone to direct and plan, or  
a great deal of the energy will be misdirected, and  
tedious or unpleasant duties will be neglected alto-  
gether. Now, this is just as important in work  
done for God as it is in factory work. "We are  
laborers together with God," and unless our work



"SPORT."

is done under His direction, we may do harm instead  
of good.

Perhaps you think your life is being frittered  
away in little trivial duties that any person could  
do, while you feel capable of higher and, as you  
think, nobler work. You do the work in a spiritless  
fashion. You think it a waste of valuable time to  
wash dishes or do the "chores," plodding along at  
the same tasks day after day. My dear friend,  
never forget the wonderful significance of those  
years spent in the carpenter's shop of Nazareth.  
He, the greatest Man, did not think those years  
wasted, although He had a world to save. He came  
into the world to do His Father's will, and He was  
content to do it. It might be working with Joseph,  
"with chisel, saw and plane," or it might be feed-  
ing thousands with bodily and spiritual food. His  
work was always great, because it was the work  
His Father had given Him to do. Is it not so with  
us too? We are very apt to forget the truth con-  
tained in the familiar lines:

"We need not bid, for cloister'd cell,  
Our neighbor and our work farewell  
Nor strive to wind ourselves too high  
For sinful man beneath the sky.  
The trivial round, the common task,  
Woe! furnish all we ought to ask  
Room to deny ourselves a road  
To bring us daily nearer God."

But, if charity begins at home, it certainly should  
not end there, if you have any opportunity at all of  
reaching out to the outside world. Surely you can  
manage to do a little missionary work in the Sun-  
day-school. If that work is done prayerfully and  
perseveringly, the seed sown may be multiplied an  
hundred-fold and go on bearing fruit to all eternity,  
increasing as the years roll on. How many chil-  
dren are there, even in this Christian Canada of  
ours, who never receive any religious teaching  
except in the Sunday school? It is a grand open-  
ing for a worker, and impressions made on a child's  
sensitive soul are very lasting. Don't be discour-  
aged if you see no result for a long time. Sow the  
seed in faith, trusting God to give the increase.

Perhaps you are longing to make some great  
sacrifice for God, overlooking the fact that you are  
refusing the small sacrifices He asks of you. You  
look for crosses to carry, but do not choose to take

up the burdens God has laid at your feet. There  
are little children to care for, but "Children are  
such a bother." There are plenty of ways in which  
other people's burdens can be lightened, but "It is  
such a nuisance to be always doing odd jobs or  
running errands for others." So you pass duty  
after duty, all the time looking out eagerly for  
Duty (spelt with a capital D). What kind of a  
harvest can you expect if you think it too much  
trouble to plant the seed? Each opportunity of  
helping another, which slips by unheeded, may rise  
up some day to witness against us—"Inasmuch as  
ye did it not to one of the least of these, ye did it  
not to Me."

What special work has God given to you? How  
can I tell? Certainly He has given you some work,  
and if you are neglecting that, in order to attempt  
what you consider to be grander and more impor-  
tant, you are making a very great mistake. God  
sees the work as a whole, and has planned out the  
duty of each worker. The man who is set to oil the  
machinery in a factory may think his work is of  
little importance—he may see no result, but he is  
helping the others to do their work easily. His part  
may be unnoticed and unthought of, but if he failed  
in his duty, the machinery would be ruined. Every-  
body's work is important, and nothing done for  
God can be small.

"Friends, in this world of hurry,  
And work, and sudden end,  
If a thought comes quick of doing  
A kindness to a friend,  
Do it that very minute! Don't put it off—don't wait.  
What's the use of doing a kindness,  
If you do it a day too late?"

HOPE.

### Our Library Table.

"TO HAVE AND TO HOLD." Mary Johnston.—  
This is a remarkable book, combining great force  
of style and a delicate delineation of character not  
often met with. Since "David Harum," perhaps  
no book has caused so great a sensation in the  
literary world, nor has had such enormous sales.  
The descriptions are picturesque in the extreme.

Here is a paragraph: "The work of the day  
being over, I sat down on my door-step,  
pipe in hand, to rest awhile in the cool of  
the evening. Death is not more still than is  
this Virginian land in the hour when the  
sun has sunk away, and it is black beneath  
the trees, and the stars brighten slowly and  
softly one by one. The birds that sang all  
day have hushed, and the horned owls, the  
monster frogs, and that strange and omi-  
nous fowl (if fowl it be, and not, as some  
assert, a spirit damned) which we English  
call the whip-poor-will, are yet silent. Later,  
the wolf will howl and the panther scream,  
but now there is no sound. The winds are  
laid, and the restless leaves droop and are  
quiet. The low lap of the water among the  
reeds is like the breathing of one who sleeps  
in his watch beside the dead."

This is no sentimental "fine writing,"  
but is a true poet's interpretation of  
nature. The period is 1621, and is full  
of stirring incident. The fine character  
of the hero, Captain Ralph Percy, and  
the dainty yet brave lady of his love, Lady Jocelyn  
Leigh; the Rev. Jeremy Sparrow, the jealous yet  
faithful Deacon—all these and others are vivid  
pictures. The Indian descriptions, too, are most  
graphic, and the numerous adventures by sea and  
land hold our interest up to the last word. Pub-  
lished by George Morang & Co, Toronto.

"IN KEDAR'S TENTS." John Seton Merriman.  
—Another delightful novel by this clever author,  
dealing with self-sacrifice, treachery, love and ad-  
venture, told with all the vigor and brilliancy  
which always distinguishes Mr. Merriman's works.  
FELIX.

### "Sport."

What a natural group! Every figure so perfect-  
ly interprets the leading sentiment of its owner.  
That enterprising young fisherman, I wonder what  
he'll catch? That boy kicking up his delighted heels  
is a jolly one, I'm sure; and the two demure-looking  
little maidens, so earnestly absorbed in the wonder-  
ful performance of brother, cousin, playfellow, or  
whatever he is! They are all too young to speculate  
about, but perhaps some day these "young sports"  
may be walking by this very spot, and moralizing  
as to whether they have ever had such happy times  
since those careless days. A truly natural and  
refreshing picture, which makes old hearts young  
again, and makes the youngsters literally long to  
go and join in the fun.

### Words of Wisdom.

Heaven without good society cannot be  
Heaven.

What's an estate good for, if it cannot buy  
content.

Who depends upon another man's table, often  
dines late.

He who rides behind another does not travel  
when he pleases. *Spain.*

He who loses money, loses much; he who loses a  
friend, loses more; but he who loses his spirits,  
loses all. *Spain.*



Travelling Notes.

AUSTRALIA.

As a rule, March with us in Canada is variable and disagreeable. Here, however, and usually until the end of October, it is delightful. The general drawback of extreme dryness is ameliorated by refreshing rains, which lay that obnoxious dust, spoken of before, and revives the sad-looking, parched grass, which now takes on that lovely green glow which is surely grass' own privilege. Still, on the whole, the brilliancy of nature does not strike us here as in many of the other places we have now seen. There are, of course, most lovely spots, such as those valleys "where the graceful fronds of the fern trees surmount trunks seven to twelve feet high. The great fronds of two years back hang down round the trunk in golden-brown beauty, while last year's growth forms a dark-green umbrella above them, and at the summit, rising straight in fresh new green, are the fronds of the year." This absolutely true and graphic description of the fern trees is from the gifted French author, Max O'Rell (Paul Blouet). Australia is certainly poor in trees, or rather in variety of them, although rich in shrubs and flowers. The Eucalyptus, or gum tree, abounds, and is not specially beautiful. Their immense height (some of them four hundred feet) and large circumference, equal to the famous Californian forest giants, make them naturally an imposing feature of the scenery. They constantly shed their coats, and then appear scraggy, lean, and as white as if they were white-washed. To quote from another well-known author who thoroughly knows this great country: "The loneliness of the Australian bush can hardly be painted in words. It extends mile after mile of primeval forest where perhaps the foot of white man has never trod—interminable vistas where the Eucalyptus trees rear their lofty trunks and spread forth their lanky limbs. Level untimbered plains alternating with undulating tracts of pasture, here and there broken by a stony ridge, steep gully or dried-up creek—all wild, vast and desolate. All the same monotonous grey coloring, except when the Wattle, when in blossom, shows patches of feathery gold, or a belt of scrub lies green, glossy and impenetrable as an Indian jungle. The solitude seems intensified by the strange sounds of reptiles, birds and insects, and by the absence of larger creatures, of which, in daytime, the only audible signs are the stampede of a herd of Kangaroo or the rustle of the Wallaby or a Dingo stirring the grass as it creeps to its lair. And there is the whirring of locusts, the demoniac chuckle of the Laughing Jackass, the screeching of cockatoos and parrots, the hissing of the frilled lizard, and the buzzing of innumerable insects hidden under the dense undergrowth. And then, at night, the melancholy wailing of the Curlews and the dismal howling of Dingoes."

These Dingoes are the wild Australian dogs, graceful creatures something like a wolf, with no bark, but just the celebrated dismal wolf howl. It is terribly destructive to sheep, and in consequence is fast being exterminated. The kangaroos, too, are not now very plentiful, and will probably gradually disappear like our own buffalo. These kangaroos are very curious in their ways. They seldom attack, but can defend themselves well. For instance, one little kangaroo trick shows much skill and forethought. When hunted by dogs he will run to a place where there is water. He will go into it and wait until the dog follows, catch his enemy's paws in his own ultra long hind ones, sit down, and with his short fore paws hold doggie under the water until he drowns. Truly, the strange, the awful silence in these Australian forests must have a tremendous effect upon those who are obliged to be much in them. Of course, in these times there is, perhaps, some difference, and gradually civilization will cut its way into the forest's heart, as it has in other regions; but there are stories of former days (not so very long ago, either, for compared to America, Australia is young) when the lonely Bushmen have been known to almost lose the faculty of speech, and when shepherds went crazy. Imagine a shepherd alone in his hut, seeing no one but the man who brought him rations from month to month, often missing seeing even this man, if absent from the hut when the rations were brought, his only living companions being the sheep and his faithful dog. What wonder that any ordinary (or extraordinary) brain should give way! We might mention that the laughing jackass is a *bird* (perhaps all *youngsters* didn't know this), and by a law of the Colonies you must not shoot him, as he is a formidable destroyer of snakes. He is a smallish, thick-set bird, with a head almost as large as his body, and *what* a beak! No wonder the snakes don't like it! His cry of *hoo hoo hoo!* *ha ha ha ha!* is irresistibly comic; in fact, the only comic sound of the whole vast solemn forest, and often his festive cry is accompanied by the frogs, who add their talent to the concert. Then, if you are very much in want of a noise other than these and the intensely dismal wail of the crow, curlew, morepork, etc., just fire a shot into the trees, and you may chance to raise a colony of cockatoos, who will soon raise a hubbub which will satisfy you. They say that the cattle seldom low here, and that a few English sheep being driven to a fresh pasture will make more row than thousands of Australian ones, which seldom bleat. We wonder sometimes whether climate has to do with this, and some day we shall ask someone cleverer than we (were that possible), and own up at once

that we *don't* know. What a difference there is as to rabbits too. In Europe, if you kill a rabbit you are liable to a fine. In Australia, however, if you *miss* a rabbit, woe to you. They are most destructive, and the squatters have to put wire fences all around their immense stations to keep them out. One may readily imagine how they can overrun everything, when it is asserted that in *ten years* two rabbits mean seventy millions. Well, perhaps, as once before, we are encroaching on our other department, so we subside.

Here in Australia exists the same thing that is so noticeable in the States, in Canada, and indeed almost everywhere, viz., the election to prominent positions of *Scotchmen*. There is certainly something in this fine race which begets confidence. Clear-headed, thrifty, honest, our old friend the "kiltie" seems to always fall on his feet into some position of trust. One might almost say the English Colonies are in the hands of the Scotch. At one time, out of seven Governors, five were Scotch. The President of the Legislative Council—a Scot—and many of the councillors. The Agent-General in London, England—another Scot—and there are numerous other instances. The south of New Zealand is as Scotch as Edinburgh, they say; and at Broken Hill, said to be the richest silver mine in the world, the five great shafts leading down to the treasures are named MacIntyre, Drew, Jamieson, MacGregor, and MacCulloch.

Recipes.

SPICED BREAD PUDDING.

This is one of the many ways in which stale crusts of bread can be used. For every breakfast cup of crust, broken up and packed closely, allow a pint of sweet milk, and soak till quite soft; then beat briskly with a fork till there are no lumps left. Stir in one-half cup of golden syrup (not treacle), one cup of stoned raisins, and a quarter teaspoonful each of salt, ground cloves, nutmeg, allspice, and cinnamon. Mix thoroughly; put into a greased dish, and bake in a moderate oven for about 40 minutes. It will be noticed that no eggs are included in this recipe. The pudding is very nice without them, but the addition of one or two beaten up with milk is an improvement.

EGGS AND WATERCRESS.

Hard boil half a dozen eggs, place in cold water, and carefully remove the shells. Cut each egg in half, lift out the yolk, place it in a basin with a little minced ham and a few capers. Moisten all with a tablespoonful of melted butter, and season with pepper. Work all together with a spoon, fill each half of the eggs, and press the two halves together. Soak some watercress in salt and water, and arrange it on a dish, place the eggs on this, and serve.

TO CLEAN A WHITE STRAW HAT.

Dip a nail brush in lemon juice and flour of sulphur, and give the entire hat a vigorous scrubbing.

BEST WAY TO CLEAN MARBLE.

Mix two parts of powdered whiting with one of powdered bluing and half a pint of soapsuds, and heat it to the boiling point; while still hot, apply with a soft cloth to the discolored marble and allow it to remain there until quite dry, then wash off with hot water in which a little salts of lemon has been dissolved. Dry with a piece of soft flannel.

A GOOD SEED CAKE.

Work two ounces of dripping into one-half pound of flour, in which a teaspoonful of baking powder has been mixed. Add two ounces of sugar and a teaspoonful of caraway seeds. Mix with enough milk to make a stiff dough, and pour into a well-greased tin. Place in a moderate oven and bake an hour.

To simmer means to cook so gently that the only motion in the water is in little bubbles around the edges of the kettle. The toughest meat may be made tender if simmered a long time in water to which a little vinegar has been added. Simmering extracts the juices. Hard boiling keeps them in. In cooking, these distinctions must be recognized if one wishes good results.

To chop suet easily, flour it and the chopping knife, and have the suet as cool as possible before chopping.

Puzzles.

[The following prizes are offered every quarter, beginning with months of April, July and October: For answers to puzzles during each quarter—1st prize, \$1.50; 2nd, \$1.00; 3rd, 75c. For original puzzles—1st, \$1.00; 2nd, 75c; 3rd, 50c. This column is open to all who comply with the following rules: Puzzles must be original—that is, must not be copied from other papers; they must be written on one side only of paper, and sender's name signed to each puzzle; answers must accompany all original puzzles (preferably on separate paper). It is not necessary to write out puzzles to which you send answers—the number of puzzle and date of issue is sufficient. Partial answers will receive credit. Work intended for first issue of any month should reach Pakenham not later than the 15th of the month previous; that for second issue not later than the 5th of that month. Leave envelope open, mark "Printer's Copy" in one corner, and letter will come for one cent. Address all work to Miss Ada Armand, Pakenham, Ont.]

1—RHOMBICOID.

Across—1, dress; 2, a pause in the musical performance of a song; 3, to put into an angle; 4, seed, particularly of animals;

5, overgrown with a certain coarse grass.

Down—1, a letter; 2, a coin; 3, the name of a genus of insects; 4, misfortunes; 5, a disease; 6, close, severe, or poignant; 7, to unite forever; 8, no good; 9, a letter. IKE ICICLE.

2—CHARADE.

Jemima, an English spinster. When a pretty lass, never did marry, So when she *One* upon the right man, Be sure she didn't tarry. A title she had, but no money, And her suitor had none too, So she took the gold of *Two* pretty *Three*, And *Complete* to Canada they flew. ROLLY.

3—CHARADE.

First and Second went to India with their mother. And one fine day she gave them permission to go in a *Complete* carried by two servants to a native village two miles away. While passing through the jungle, a loud roar smote upon their ears, and a giant tiger bounded across the path. The bearers, with a yell, dropped their burden and bolted, leaving the terrified children crouching low in the *Complete*. Soon a party of beaters and the hunters came along, also the cowardly servants, and the children got over their fright in a short time. ROLLY.

4—THE BIRD PUZZLE.

In the woods the other day I saw four robins, four sparrows, four jays and four woodpeckers. Show how these sixteen birds might have arranged themselves, one bird in each tree, in a square of four trees to a side, so that no two birds of the same kind should be in any one of the four rows, any one of the four columns, or any one of the two diagonals. F. L. S.

5—NUMERICAL ENIGMA.

I contain thirteen letters, and name a very popular English novel. 1, 2, 3, 5, 7 baked clay used in building. 9, 12, 6, 3 a circle of light. 13, 4, 7, 6 an antiquated mode of settling a dispute. 5, 10, 11, 12, 8, 9 an expired gas. M. N.

6—CHARADE.

My *whole* is an atrocious deed, But rarely done in modern times; But many a year on the great seas Was the scourge of all transporting lines, And my *first* is but an animal small Whose skin is used in artistic wear, And my *second* and *last* is a short repose Which catches the idle unaware. NOTA BENE.

7—LOGOGRAPH.

Whole I am to loan; behead and transpose, I am weary; delete, I am fastened; transpose, I am to devise; transpose again, I am a flow of water; again transpose, I am good; curtail, I am a small cube; delete and transpose, I am abbreviation for a man's name; behead, and I am in England. NOTA BENE.

8—NUMERICAL ENIGMA.

15, 14, 12, 9, 3, 10 is a conception or sentiment. In 11, 7, 1 a poisonous serpent you can see. By 4, 11, 5, 2, 13, 3, 15, putrid flesh is meant. Rock-bound and iron-bound 4, 3, 6, 7, 8 is sometimes said to be. My whole looks forward to to-morrow's morn. It leaves many paupers on life's way; So always listen to the words of wisdom, "Never put off what you can do to-day." IKE ICICLE.

9—NUMERICAL ENIGMA.

My 1, 2 is a Greek word for earth. My 4, 5, 6 is a epoch. My 8, 7, 6, 3 is a sect. My 12, 13, 4, 5 is a derision. My 7, 10 is a text beginning. My whole is the name of a capitulated commander. MURIEL DAY.

Answers to April 20th Puzzles.

- 1—Pentagon.
- 2—Saw no omen if a fine moon was.
- 3—Queen Victoria—Canada.
- 4—C a p e T o w n  
a e r l o b e o  
p r o s w e a r  
e l s i n o r e
- 5—Able was I ere I saw Elba.
- 6—Ladysmith.
- 7—f r a m e  
r a v e n  
a v e r t  
m e r g e  
e n t e r
- 8—Methuen.

SOLVERS TO APRIL 20TH PUZZLES.

"Diana," "Ike Icicle," M. R. G., Muriel Day, Lizzie Conner.

ADDITIONAL SOLVERS TO APRIL 5TH PUZZLES.

Lizzie Conner, "Ike Icicle."

COUSINLY CHAT.

"Nota Bene." You are quite welcome, but please write your puzzles in ink. R's address is Howard Mills, Malakoff, Ont.

"Ike Icicle." We do not understand that sort of chemistry in this Province. Please do not give us any more examples of it. Shorter puzzles are more acceptable where space is at a premium. I am glad you have found time to solve. Lizzie C.—I am glad to have you back again. You have not forgotten how to solve, I see. Muriel would like another "Memory Gem" contest. What do the other cousins say about it? "Diana."—You are eligible; we have all sorts, from the schoolmarm to the small boy.

Colonel Sargeant tells many enjoyable war stories. Once when instructing some men, he asked, "When you are on the skirmish line, and suddenly encounter the enemy, what would you do?" "Fall flat." "And what next?" "Stay there." On another occasion he was questioning a man respecting his absence for six hours. "I was chasing a Filipino an hour, sir." "How about the other five hours?" "The Filipino and his friends were chasing me, sir."

"Silence in the court!" thundered a Kentucky judge, the other morning. "Half a dozen men have been convicted already, without the Court's having been able to hear a word of the testimony."

## Our Agricultural Library Offer.

A RECENT bulletin prepared by Prof. J. B. Reynolds, of the Ontario Agricultural College, Guelph, and referred to editorially in this issue, gives a list of meritorious books on Agriculture, Live Stock, Dairying, and Fruit Growing, from which we have made a selection and added a few others:

### SOIL AND CROP.

THE FERTILITY OF THE LAND.—Roberts. 372 pages. \$1.25.  
A BOOK ON SILAGE.—Woll. 185 pages. \$1.00.  
SOILS AND CROPS.—Morrow & Hunt. \$1.00.  
FORAGE CROPS.—Thos. Shaw. \$1.00.

### LIVE STOCK.

THE STUDY OF BREEDS (CATTLE, SHEEP, AND SWINE).—Prof. Shaw. 400 pages; 60 engravings. \$1.50.  
HORSE BREEDING.—Sanders. 422 pages. \$1.50.  
LIGHT HORSES—BREEDS AND MANAGEMENT. 226 pages. \$1.00.  
HEAVY HORSES—BREEDS AND MANAGEMENT. 219 pages. \$1.00. } Vinton Series.  
CATTLE—BREEDS AND MANAGEMENT. 270 pages. \$1.00.  
SHEEP—BREEDS AND MANAGEMENT. 232 pages. \$1.00.  
CATTLE BREEDING.—Warfield. 386 pages. \$2.00.  
THE DOMESTIC SHEEP.—Stewart. 371 pages. \$1.75.  
PIGS—BREEDS AND MANAGEMENT.—Sanders Spencer. 175 pages. \$1.00.  
FEEDS AND FEEDING.—Henry. 600 pages. \$2.00.

### GENERAL AGRICULTURE.

AGRICULTURE.—C. C. James. 200 pages. 30 cents.  
FIRST PRINCIPLES OF AGRICULTURE.—Voorhees. 207 pages. \$1.00.  
AGRICULTURE.—Storer. 1,875 pages, in three volumes. \$5.00.  
CHEMISTRY OF THE FARM.—Warrington. 183 pages. 90 cents.  
FARMYARD MANURE.—Aikman. 65 pages. 50 cents.  
BARN BUILDING.—Sanders. 280 pages. \$2.00.  
IRRIGATION AND DRAINAGE.—King. 502 pages. \$1.50.  
IRRIGATION FOR THE FARM GARDEN AND ORCHARD.—Henry Stewart. \$1.00.

### DAIRYING.

AMERICAN DAIRYING.—H. B. Gurler. 252 pages. \$1.00.  
THE BOOK OF THE DAIRY.—Fleischmann. 330 pages. \$2.75.  
MILK AND ITS PRODUCTS.—Wing. 230 pages. \$1.00.  
TESTING MILK AND ITS PRODUCTS.—Farrington & Woll. 255 pages. \$1.00.

### POULTRY.

ARTIFICIAL INCUBATING AND BROODING.—Cypher. 146 pages. 50 cents.  
PRACTICAL POULTRY-KEEPER.—Wright. \$2.00.

### APIARY.

THE HONEYBEE.—Langstroth. 521 pages. \$1.40.

### FRUIT, FLOWERS, AND VEGETABLES.

VEGETABLE GARDENING.—Green. 224 pages. \$1.25.  
FLOWERS AND HOW TO GROW THEM.—Rexford. 175 pages. 50 cents.  
THE PRINCIPLES OF FRUIT-GROWING.—Bailey. 514 pages. \$1.25.  
BUSH FRUITS.—Card. 537 pages. \$1.50.  
HORTICULTURIST'S RULE BOOK.—Bailey. 312 pages. 75 cents.  
THE NURSERY BOOK.—Bailey. 365 pages; 152 illustrations. \$1.00.  
AMATEUR FRUIT-GROWING.—Samuel B. Green. 587 inches; 134 pages, with numerous fly leaves for notes; bound in cloth, and profusely illustrated. 50 cents.

### PLANT AND ANIMAL LIFE.

THE STORY OF THE PLANTS.—Grant Allen. 213 pages. 40 cents.  
THE STUDY OF ANIMAL LIFE.—J. A. Thomson. 375 pages. \$1.75.  
INSECTS INJURIOUS TO FRUITS.—Saunders. 136 pages. \$2.00.

## HOW TO OBTAIN THESE BOOKS:

We will furnish present subscribers any of the above books as premiums for obtaining new yearly subscribers to the FARMER'S ADVOCATE, at \$1.00 each, according to the following scale:

Books valued at from	\$0.30 to \$0.65, for	1 new subscriber.
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We can furnish any of the above books at the regular retail price, which is given opposite the title of the book. By a careful study of the above list, any farmer can choose a select list of books suited to his needs, and for a small outlay in cash, or effort in obtaining new subscribers for the ADVOCATE, secure the nucleus of a useful library.

The WILLIAM WELD CO., Ltd., WINNIPEG, MAN.

## THE PROVINCIAL Mutual Hail Insurance Co.

Incorporated in 1891 by] OF MANITOBA. [Manitoba Government.

PRESIDENT—  
John Renton, Farmer, Deloraine.

VICE-PRESIDENT—  
C. J. Thomson, Farmer, Virden.

## The Original Hail Insurance Co.

MANAGED BY THE FARMERS THEMSELVES.

During the nine years of its existence, this Company has paid about ONE HUNDRED AND TWENTY THOUSAND DOLLARS for losses sustained by farmers by hail storms. The assessments have ranged from 12½ cents to 25 cents per acre, which is the maximum that can be charged. The average amount paid for losses has been \$5.50 per acre for total loss, and at the same rate for partial losses.

### BOARD OF DIRECTORS FOR 1900.

T. L. MORTON, Farmer, Gladstone.  
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LOCAL AGENTS AT ALL PRINCIPAL POINTS IN THE PROVINCE.

### YOUR ATTENTION

Our No. 1 Collection contains 33 full sized packets of the best Vegetable Seeds, sufficient to furnish vegetables throughout the year, and one packet of Wild Garden Flower Seeds, which we will send prepaid to any address in the Dominion of Canada or United States for the extremely low price of \$1.

Our No. 2 Collection contains 16 packets of Vegetable Seeds and one packet Wild Garden Flower Seed Mixture. Prepaid for 50 cents.

Our No. 3 Collection contains 8 packets of Vegetable Seeds for 25c.

Our No. 4 Collection contains 40 packets of Flower Seeds for \$1.

Our No. 5 Collection contains 20 packets of Flower Seeds for 50c.

Our No. 6 Collection contains 10 packets of Flower Seeds for 25c.

All postpaid on receipt of price. For varieties in above collections see our Handsome Illustrated Catalogue containing other great offers. Mailed free to any address.

**R. ALSTON, Royal Greenhouse & Seed Establishment, WINNIPEG, MAN.**

### NOTICE.

The Manitoba Farmers' Mutual Hail Insurance Co., whose advertisement will be found in this issue, has been reorganized and put on what should prove a satisfactory footing. For the past 6 or 8 months this Company has undergone a perfect storm of criticism, much of which has doubtless been well founded. Now, however, a new directorate made up of farmers from the different sections of the Province has been appointed, with Mr. C. W. Graham, who was for many years Secretary of the Patrons of Industry, as Manager and Secretary-Treasurer. A new set of by-laws has been adopted, and also a new form of contract. The assessment is reduced from 5 to 4. The limit of insurance is \$5 per acre. The contracts are made on a five-year basis, but may be cancelled any year by paying the current dues. The Manager says that there is over \$2,000,000 of insurance on the books, and in spite of the difficulties through which the Company has passed on account of the mismanagement of the original promoters, he has every confidence in a successful future for the Company. This year no irresponsible travelling agents are being appointed, but local agents are handling the business, and these being carefully selected from among business men of the country, should do much to restore public confidence in the Company.

### GOSSIP.

Mr. Sanders Spencer, Holywell Manor, writes us that the transfer noted in our April 20th issue, of the White Siltston-bred Short-horn bull, Count Arthur, by Mr. Joliffe, to Rev. J. S. Smith, of Boyle, Ireland, could not be consummated, as the bull had to be slaughtered at the farm of the former gentleman. This, Mr. Spencer says, I learned a few days ago from a letter from Rev. Mr. Smith, who had unsuccessfully tempted me to sell to him Count Arthur's red brother, Count Valiant, a bull which Mr. J. D. Willis showed and used in his own herd ere I bought him some 2½ years ago.

### THE JERSEY CATTLE CLUB.

The 32nd annual meeting of the American Jersey Cattle Club was held at New York, May 2nd, and was attended by 37 members, from 13 States, 102 represented by proxy. The number of animals registered for the year ending March 1st, 1900, was: Bulls, 3,125; cows, 9,280; total, 12,405. One hundred and thirteen animals imported during the year were registered. The transfers for the year were 12,356. During the year 327 butter tests were accepted for publication. A recommendation of the board of directors was adopted, to the effect that in registering the first calf of a heifer, if the date of service is not known, the statement "served in pasture" will be considered sufficient to comply with the portion of the by-laws relating to that point. A committee was appointed to act in the matter of a dairy test at the Pan-American Exposition at Buffalo in 1901, and a sum not to exceed \$5,000 appropriated for that purpose. The receipts of the Club from all sources for the year have been \$29,672, and the expenses \$23,992; net gain, \$5,780; assets—\$21,691. Officers—elect: President, A. B. Darling; Vice-President, Geo. E. Peet; Secretary, J. J. Henningway; Corresponding Secretary, Valancey E. Fuller.

Baseball,  
Croquet,  
Tennis,  
Cricket,  
Football,  
Lacrosse,

All these goods and all

## Sporting Goods.

Prices and illustrations in our

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The best assortment in the Northwest.

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## The Good Enough Sulky Plow

CAN NOT BE BEAT.

The Price will please you and its work will surprise you!

Write for illustrated circular. It will pay you.

MINNESOTA MOLINE PLOW CO.

H. F. Anderson, Agent, Winnipeg, Man.

NOTICES.

In writing advertisements, please mention "Farmer's Advocate."

Because it Does the Work.

DOWNING, Wis., Oct. 12, 1899. I sell your CAUSTIC BALSAM and find it a good seller because it does the work. Would like some advertising matter; let a thing be ever so good, if you don't keep it before the people sales will fall off. It will do the rest. E. F. STODDARD.

A Good Investment.—Sixty typewriting machines of the newest and best models represent a nice little sum of money. The investment of the required amount has been made by Mr. W. H. Shaw, principal of the Central Business College, Toronto, in behalf of the young people who attend his school, by purchasing 50 new Underwood machines, and 10 samples of other standard kinds. The Central Business College is the first Canadian school to adopt the touch method of typewriting, which requires a scientific fingering of the key-board and the use of all fingers of each hand. Under the direction of a special teacher, the students in this school can scarcely fail to become expert typewriters, and we are not surprised to learn that the graduates of the shorthand department of this college are always successful in filling the best situations going.

GOSSIP.

At the Shorthorn sale, April 26th, from the herds of W. T. Miller and others at Winchester Ind., 39 head sold for an average of \$235. Messrs. Miller's 14 females made an average of \$375; 4 bulls an average of \$240, and 18 head an average of \$315. The roan 4-year-old show cow, Sallie Girl, by Royal Hero, went to W. O. Minor, Heppner, Oregon, at \$1,700. The next highest price for a cow was \$425 for Roan Marble, 2 years old, by the same sire and to the same buyer. The highest price for a bull was \$450, for the 11-months calf, Trout Creek Clan Alpine.

The following testimony of experience with the sheep-shearing machine advertised by the Chicago Flexible Shaft Co., 158 Huron St., Chicago, is from George McKerrrow, of Sussex, Wis., who is well known among the shepherds of the United States and Canada, being President of the American Oxford Down Sheep Breeders' Association: "I sheared a 250-pound prize Oxford in 8 minutes, better and easier than I ever sheared a sheep before. My 16-year-old son sheared a number of large rams in 12 to 15 minutes each, doing a smooth, nice job. More than the price of shearing per head is saved on each sheep in wool, and the price is again saved in freedom from cuts on valuable sheep. We would rather pay liberally for machine shearing than have the work done old-style for nothing."

The Stevens Wagon

Undoubtedly THE BEST offered to the Canadian Farmer to-day.

HIGH WHEEL: Easy running.

STRONG AXLE: Has perfect truss-rod; Skein takes more timber than any other farm wagon.

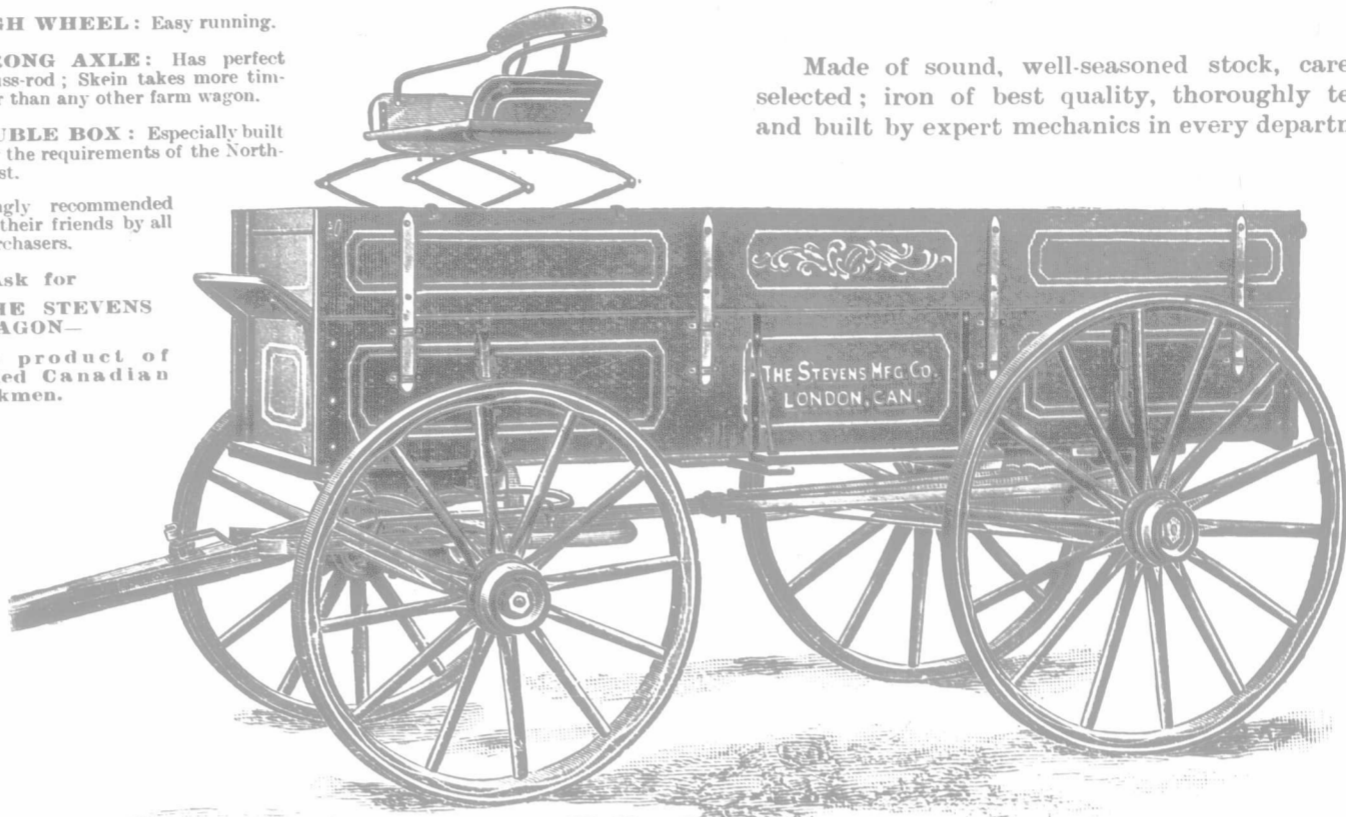
DOUBLE BOX: Especially built for the requirements of the Northwest.

Strongly recommended to their friends by all purchasers.

Ask for

THE STEVENS WAGON—

the product of skilled Canadian workmen.



Made of sound, well-seasoned stock, carefully selected; iron of best quality, thoroughly tested, and built by expert mechanics in every department.

STEVENS MANUFACTURING CO.,

Head Office: LONDON, ONT. Branch Depot: Princes St, WINNIPEG, MAN.

MUSIC.

Britons Remember, best patriotic song, 40 cts. We keep the largest and best-assorted stock of sheet music and music teachers' supplies in Western Canada. Our prices are the lowest, and our Musical Instruments are thoroughly reliable. Send for one of our \$7.00 talking machines, the Columbia Graphophone. BARROWCLOUGH & CO., 470 Main Street, Winnipeg, Man. Mention this paper.

COMPLETE REORGANIZATION.

The Manitoba Farmers' Mutual Hail Insurance Co.

A MUTUAL Hail Insurance Co. of the farmers, for the farmers.

CROP ACREAGE ONLY INSURED. REMUNERATION \$5.00 PER ACRE.

Limit of assessment reduced to Four per cent. (equals 20 cents per acre). \$2,000,000 Insurance in force. Good reliable local agents wanted. Correspondence solicited.

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PATENTED STEEL ROLLER BEARINGS IMPROVED STEEL FRAME

And combined Foot and Lever Drive, improvements you will not find on other churns. Do you want the best? Then don't purchase until you see it. Sold by the leading wholesale houses in the Dominion.

No.	CAPACITY.	Churns from
0	6 gl.	1 to 3 gl. cream.
1	10	1 to 5 "
2	15	2 to 7 "
3	20	3 to 9 "
4	25	4 to 12 "
5	30	6 to 14 "
6	40	8 to 20 "

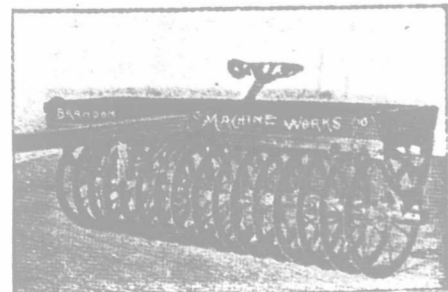


CANADIAN DAIRY SUPPLY COMPANY,

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Agents Manitoba and the Territories.

Sub-Surface Packer and Davidson's Grain Pickler.



Manufactured by THE Brandon Machine Works Co. BRANDON, MAN.



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Alexandra and Melotte

CREAM SEPARATORS

STAND UNRIVALLED FOR LARGE OR SMALL DAIRIES.

"The proof o' the puddin' is the prein o't."

Do not be misled by interested agents, men of ready speech, who are all selling the "best" machine, no matter how cheap and worthless they are, and which certainly are the best for separating the unwary farmer from his hard-earned money. Listen to men in your own rank who have tested them:

INNSFALL, ALTA., NOVEMBER 27TH, 1899.

DEAR SIRS, The No. 2 MELOTTE separator you sold me some time ago is very satisfactory, even more than we expected. A child ten years of age can turn it. It is both easy to turn and separates more milk in a given time than any other separator of the same size I have ever seen. I can safely recommend it as being the best separator in use here. Yours very truly, HUGH R. ROSS.

For full description, prices, and copies of reliable testimonials, address:

R. A. LISTER & CO.,

LIMITED,

232 KING STREET,

WINNIPEG, MANITOBA.

Please Mention Farmer's Advocate.

## COOPER SALE MAY 30 AT COOPERSBURG, PA.

WHEN I went to the Island of Jersey it was not my intention of buying anything near the number of Jerseys that I did, but I fell in love with the Golden Lad - Sultanas, and the weakness that I have displayed the last 20 years again got the best of me, and I was not satisfied unless I had the best. To accomplish this, it took patience, judgment and money. Those who will attend my sale, May 30th, will say they saw the finest lot of cattle I ever imported.

Those who are anxious to improve on the fore udders in their herds can get at this sale just what is wanted. There will be such a show of Golden Lad cows in milk that old-time breeders will be forced to "smile" and grin (to themselves) and say, "What have I been doing the last 20 years in neglecting my cows' udders?" They will see at a glance the prepotency of a most remarkable sire.

Most of the Golden Lad cows and others are again safe in calf to Golden Lad's Champion 57222 (late Hamley), by Golden Lad, and Champion Winner over the Island, 1899, beating, with others, the Champion Winner of 1898, also by Golden Lad. Others have been bred to Golden Lad of St. Peters 57223, Champion Winner over the three Western Parishes. The young bulls and heifer calves (many out of the Golden Lad cows) will be a rare lot to select from.

Immediately after the sale is over, the buyer can take his return train and feel assured that his purchase will be forwarded promptly and at as reasonable a rate as can be procured, as has been our practice at all our public sales the last 20 years.

Through train from Chicago leaves Toronto 6 p. m., reaching Coopersburg, via L. V. R. R., the following morning at 7.30. Buy tickets for Lehigh Valley R. R. via Suspension Bridge.

Catalogues now ready. Send postal card for same.

T. S. COOPER,  
Coopersburg, Pa.

P. S.—The entire importation has been examined for tuberculosis by Dr. Francis Bridge, Veterinarian for the Pennsylvania State Board of Agriculture for 18 years, and health certificates will be given with every animal. The entire importation will be sold, and although tempting offers have been made for certain animals, none will be sold at private sale.—T. S. C.

## ALPHA CREAM SEPARATORS. NEW 20th CENTURY Styles, Capacities, Prices, &c. JANUARY 1st, 1900.

September 1st, 1899, marked the introduction of the Improved 20th Century "Baby" or "Dairy" sizes and styles of "Alpha" De Laval Cream Separators. These improvements constitute a large advance in centrifugal cream separator construction and efficiency. Great as has been the universal conceded superiority of the De Laval machines heretofore, the standard is now raised still higher. As near practical perfection as have been the De Laval Separators the past year, the latest improvements make them still better, until it is difficult to day to perceive the possibilities of further improvement.

### New 20th Century Styles and Sizes.

The De Laval "Baby" or Dairy Cream Separators are now made in six different sizes and styles. All are of the improved "Alpha" or "Disc" construction. The "Humming Bird" is solely a hand machine. The Dairy Turbine is solely a steam-motor machine. All of the other sizes are capable of convenient use either by hand or power.

### Sizes, Capacities, and Prices.

SIZE.	Capacity, Lbs. per hour.	Equal to Lbs. of any other Separator.	PRICE.
Humming-Bird	225	300	\$ 65.00
No. 1 Iron Stool	350	450	100.00
No. 2 Iron Stool	450	550	125.00
No. 2 High Frame	450	550	125.00
No. 3 High Frame	850	1000	200.00
Dairy Turbine	850	1000	225.00

On demand we will send a fine booklet: "KEEPING COWS FOR PROFIT," and 20th Century Catalogue.

### GENERAL AGENTS:

The Canadian Dairy Supply Co.,  
236 KING ST., WINNIPEG.

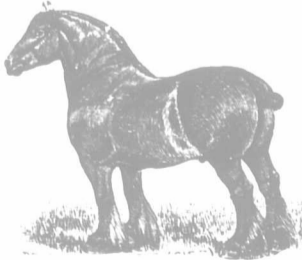
## RYAN & FARES.



Largest dealers in all of western Canada. We have on hand from 75 to 150 head of pure bred Percherons for sale all ages. All of our stock is from some very fashionable blood stock. Our yearlings up to 2 years are prepared to sell at a moment's notice. We also keep on hand a fine lot of pure bred dray horses, and are ready to take orders for the same. Write for catalogue.

215 JAMES STREET, WINNIPEG.

## J. E. SMITH,



### IMPORTER AND BREEDER.

HAS FOR SALE—  
CLYDESDALES—Bargains in Stallions and Mares, all ages.  
SHORTHORNS—Choice Bulls, Cows and Heifers.  
HEREFORDS—17 Heifers.

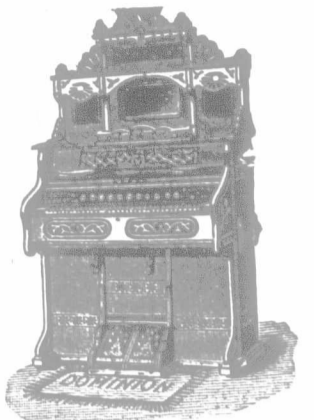
All animals registered in their respective herd books. Each thing for sale except the stock bulls, Royal Standard and Golden Measure. If notified, orders will be met at the station. Come and see the stock. Satisfaction guaranteed. Write or wire.

J. E. SMITH,  
Saultfield Ave., BRANDON.

## "DOMINION" PIANOS & ORGANS



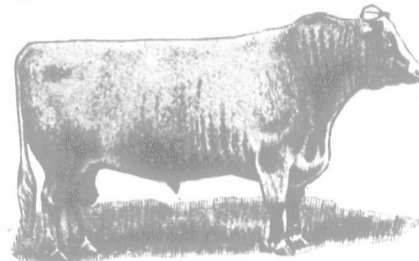
HAVE been before the public for thirty years, and are in use to-day in 60,000 Canadian homes. If you want a piano or organ that is above criticism, get a "DOMINION."  
For catalogues address—



THE "Dominion" Organ and Piano Co., Limited, Bowmanville, Ont.

## "PRAIRIE HOME STOCK FARM."

Bulls at head of herd:  
Judge—23419—and Imp. Jubilee—28858—



Yorkshire and Berkshire Swine,  
Clydesdale Stallions and  
Shropshire Sheep,  
Shorthorn and Ayrshire Cattle.

THOS. GREENWAY, Proprietor, in  
JAMES YULE, Manager, Crystal City.

## SHORTHORNS



Masterpiece—23750—, by Imp. Grand Sweep, out of an Indian Chief dam, at head of herd. Imp. Large Yorkshires for sale.

JAMES BRAY,  
LONGBURN, MAN.

### GOSSIP.

Leslie Smith, late farm and stock manager for N. P. Clark, St. Cloud, Minn., called at this office recently while on a business trip to the Province. Mr. Smith has just landed at St. Cloud a carload of Shorthorns, selected from the leading herds of Ontario, and purposes spending the next two months in the Old Country, selecting Shorthorns and Clydesdales for N. P. Clark and others.

J. C. McLeod, of Nixa, recently bought from N. P. Clark, of St. Cloud, several Clydesdale stallions: Prince Remarkable (imp.), by William the Conqueror; Hotspur (imp.), by McGregor, dam by Danley; Ronald McGregor, by Stanley Prince, dam Margaret McGregor, a daughter of Lily McGregor; Prince Luckenbooth, by the World's Fair winner; Prince Patrick; and Salisbury, by Stanley Prince.

Dairy Superintendent Murray has been occupied since the closing of the dairy school inspecting the creameries and cheese factories of the Province. Cheese Instructor Kimmman has been giving instruction in cheesemaking, etc., at Otterburn and in the Eastern Mennonite Reserve. Mr. Murray reports the reopening of several creameries this year that did not operate last year. All creameries report encouraging prospects for this year.

W. W. Fraser, of D. Fraser & Sons, Lake Louise Farm, Emerson, recently returned from a purchasing trip to Ontario. He brought back with him the Clydesdale stallion, "Jubilee Prince," by Kintore Hero, 4 years old, weight 2,100 lbs., a deep bodied, smooth horse, well ribbed up, winner of first prize in Toronto last fall in the Canadian-bred class; a yearling filly, got by Jubilee Prince; 3 registered mares, and some Shorthorns, including an 18-month-old bull and two 19-month-old heifers.

When in Regina recently your representative looked over a bunch of 19 registered Shorthorn bulls, imported by Messrs. M. & Douglas Peterson, of Regina. Mr. M. Peterson, who has been handling registered bulls and horses for a number of years, carefully selected this lot from well-known herds in Wellington and Waterloo counties. Some of the bulls are to be sold to farmers in Regina district, and a number will be sent on to Prince Albert. These bulls are all young, being between the ages of 14 and 21 months. They are good strong, thrifty fellows. Messrs. Peterson Bros. intend going in for handling stock on a large scale, and will pay special attention to importing bulls from Ontario and placing them in the Territories.

Mrs. E. E. Greenall has recently purchased a herd of Shorthorns for Birch Hill Stock Farm, which is situated 11 miles north-west of Yorkton, Assa. The herd consists of 17 breeding cows, 6 three-year-old heifers in calf, 3 two-year-old and 7 yearling heifers, besides a bunch of calves. This herd was bred by and purchased from Dr. Sibbald, The Briars, Sutton West, Ontario. In the foundation of this herd such noted sires have been used as Duke of Athol, tracing on sire's side to the great Crisp-hawk bull, Royal Burmington; Butterfly Duke, tracing to the 14 Duke of Clarence; the \$12,000 bull that headed the Bay Park herd; Mazurka Duke and The Dandy, tracing to the Duke of Cornwall. Mr. Toy is manager of the herd, to whom all enquiries should be addressed.

## Bulls! Bulls! Bulls!

We have 9 young Short-horn bulls, home bred, and recently imported from some of the best Eastern herds. All fit for service. We are quoting prices down in order to dispose of the lot as quickly as possible. A few good sows for sale cheap, to farrow May and June. B. P. Rock eggs, \$1.50 per setting of 15. Roland, N. P. R.

Carman, C. P. R.  
ANDREW GRAHAM,  
Pomeroy P. O.

## THREE BULLS

Fit for service, the best I ever offered, for sale. Also some fine two-year old and year-old heifers.

GEORGE RANKIN, Hamiota, Man.

## Birch Hills Stock Farm,

Owned by  
MRS. E. E. GREENALL, - Yorkton, Assa.

Announces having purchased from Dr. F. C. Sibbald, "The Briars," Sutton West, Ont., his entire herd of Western Shorthorns. My present stock consists of 52 head of choice breeding. Such noted sires as Royal Burmington, Duke of Athol, Butterfly Duke, Mazurka Duke and The Dandy have been used in the formation of this herd. For terms and particulars address—

STEPHEN TOYE, Mgr., - Yorkton, Assa.

## THORNDALE STOCK FARM,

MANITOU.

JOHN S. ROBSON, PROP.

Females of all ages FOR SALE.

Write for particulars.

## \$75 BUYS A FINE RED 11 MONTHS OLD \$75

## Shorthorn Bull

Of deep milking strain. Sire Senator of Bunsforth—11256—

Ed. Anderson, Dugald, Man.

## PIONEER HERD OF SHORTHORNS

Won the gold medal at the last Winnipeg Industrial Exhibition; also first for bull and two of his get, first for cow and two of her progeny, and numerous prizes for individuals. They were bred right here, and I can usually show a few generations of their ancestors, and am always pleased to show them.

WALTER LYNCH, Westbourne, Man.  
P. O., Railway and Telegraph.

## ELMWOOD STOCK FARM.

Scotch Shorthorns for Sale:

Three grand young bulls, all got by imported Scotch sires, and out of extra good cows, by imported bulls.

H. O. AYEART, MIDDLEBURCH, MAN.

SHORTHORNS, YORKSHIRES AND TAMWORTHS.

Stock of all ages and both sexes, at prices according to quality. Auction sales of farm stock undertaken. Improved farm and wild lands for sale in the Winnipeg district. Correspondence solicited.

W. G. STYLES,  
Sec. 12-13-1, West, Rosser P. O., C. P. R.

GOSSIP.

H. J. Davis, Woodstock, Ont., advertises in this issue Yorkshire hogs of the bacon type, sows in pig, boars and sows ready for breeding, and spring pigs to 3 months old, registered and export prepaid.

SCOTCH AYRSHIRES FOR CANADA.

Mr. Robert Hunter, representative of Mr. Ogilvie, Lachine Rapids Farm, Montreal, Canada, has been busy in Scotland of late making a very select purchase of Ayrshires to augment Mr. Ogilvie's already famous herd. Prominent among the 16 animals in the importation is the comely 3-year-old cow, Senoria of Old Graityne, at the reported price of 100 guineas. She was bred by Messrs. A. & W. Kerr, Old Graityne, Greta; is a daughter of the noted Peter of Whitehill, and has made a remarkable performance, winning the championship both at Castle Douglas and Ayr, and would not have been sold, only the Messrs. Kerr are fortunate in being owners of a full brother of the queen—a 2-year-old bull—from which they hope to breed more Derby winners in future. From Mr. Jas. Murray, Muir, Cumnock, he has purchased the cow in milk that won first at Cumnock this year as female champion, and another cow that has won for Mr. Murray like honors on two previous occasions. From Mr. Gray, Barnmoorhill, was purchased his well-bred cow that secured for her breeder second in milk at Tarbolton, and is a model Canadian cow. There was also purchased from Mr. Gray a daughter of this cow, and another equally attractive animal. Among other purchases were: From Mr. Montgomery, Lessnessock, a 3-year-old quey that has won for her breeder many firsts at Ochiltree and Cumnock; from Mr. Symington, Connel Bush, Sangubar, a very good 2-year-old, bred by Messrs. Wardrop, Garluff, Cumnock. Mr. Woodburn's famous Hole-house stock adds a worthy representative in a grand, big, useful 3-year-old quey, with all the appearance of doing credit to that milky herd. Mr. Robert Woodburn, Jr., Whitehall, has sold Mr. Hunter a good 1-year-old bull by Prince Robert of Holehouse, an Auchenbrain-bred bull that was lately sold at a high price. From Mr. M'Kean, Dam of Aber, his great bull, Douglasdale (3851), champion at Glasgow, 1900, bred by Mr. M'Kinlay, Hillhouse, Sandilands, also the good 2-year-old heifer, Lady Montrose, that won first honors at Glasgow, as well as Mr. M'Kean's cow, from Mr. Cockrane, Nethereraig, his stylish 3-year-old heifer, Dandy Lass of Nethereraig (1382), bred by Messrs. R. & J. Hunter, Foulton, that was first at Kilmaurs as quey in calf; also Kirsty II. of Nethereraig, a 2-year-old heifer bred by Mr. Mackay, Drogan Mains, grandsire Glencairn III., a bull that has left good stock in Canada. From Mr. Todd, Harperland, his champion cow Nellie IV., as a 3-year-old, first and champion at Dundonald, first and champion at Kilmarnock, first and champion at Irvine as a 4-year-old, first at Ayr as cow in milk, and first and champion at Irvine. From the Messrs. McAlister, Mid-Ascog, Rothsay, their great stylish black and white heifer, after Private of Knockdon, that was first at Kilmarnock (uncalved), third at Glasgow, being beaten by her stable companions, seventh in Ayr Derby, and third in meal. This is perhaps one of the best selections of Ayrshires that has ever gone to Canada. They were to sail May 5th.

THREE NOTABLE CLYDESDALES.

On page 274 of this issue appears a faithful representation of the Clydesdale stallion, Prince of Kinellar [2175] as he appeared in 1899, soon after an extensive service season. It does not, however, do him justice in his present form, as he has developed wonderfully since the photograph was taken. Prince of Kinellar was bred by James Durno, Aberdeenshire, Scotland, and foaled in June, 1896. He was imported by Mr. C. Campbell, of Kinellar, Scotland, and for some time owned by John Davidson, Ashburn, who sold him in February, 1900, to Mr. G. Moore, Rothsay, Ont. He is not only a model horse in form, color, uniformity, disposition, underpinning and action, but he is also exceptionally well bred, his sire, Prince of Erskine (9616), being out of the Danuley mare, Hatton Beauty, whose dam was Hatton Belle, by Time of Day. His pedigree combines the blood of Danuley (222), Prince of Wales (673) and Victor (892) on maternal side, his dam being sired by a horse combining the blood of these noted horses. Mr. Moore was so well pleased with his purchase that he returned in March to Mr. Davidson's and purchased the good horse St. Clair for himself and partner, Jno. E. Stanton, Cotswold, Ont. St. Clair (10640) was foaled in 1897. He was bred by St. Clair Cunningham, Dunbar, Scotland. He was sired by Sir Eyearard (5353), the sire of Baron's Pride, and his dam, Nancy, was by Belted Knight (1335), and traces back to Prince of Avondale, Richard 3rd, Young Clansman and Loudoun Tam (508). Mr. Alex. Galbraith, Secretary of the American Clydesdale Association, and one of the best judges of Clydesdales and pedigrees, writes:—"The breeding of the colt St. Clair (10640) is first-class. There could be nothing better than the first three top crosses, Sir Eyearard, Belted Knight and Prince of Avondale." St. Clair is the making of a very large horse, with the very best of feet and legs. He has, also, a grand top, and his action is good at all paces. Having disposed of these two horses, Mr. Davidson required another to replace them, and to that end purchased the colt Tofty Superior from his father, Jas. I. Davidson, Balsam, Ont. Tofty Superior (2522), bred by James I. Davidson & Son, was foaled in March, 1896. His sire, Tofty Imp. (9452), was a prizewinner in every competition entered in the leading shows in Canada, including gold medal at Ottawa in '95. Tofty Superior's dam was Kate Hill 2nd, the winner of 12 first prizes and several sweepstakes and gold medal, winning sweepstakes for best mare and two of her progeny at the Toronto Industrial, progeny being Tofty Superior and his full brother, Pride of Balsam. Tofty Superior's grandsire was Lewie Gordon, winner of twelve first prizes. Tofty Superior is of the large type, will weigh over 2,000 when developed, and greatly resembles his grandsire, Lewie Gordon, in conformation, except that he is 3" taller, lighter and larger. His action is good; his feet and legs are right; he has a nice fringe of the silky hair; he has a short, stout back, good neck and carriage, a very strong shoulder and deep, full chest. He is now in service, and promises to do a profitable season both for his owner and the constituency in which he travels.

Send for Illustrated Price List.

Wire Nails— 1 in. and 1 1/2 in., \$4.15 per keg. 1 1/2 in., 3.80 " 1 1/2 in. and 1 3/4 in., 3.55 " 2 in. and 2 1/2 in., 3.45 " 2 1/2 in. and 3 in., 3.30 " 3 in. and 3 1/2 in., 3.15 " 3 1/2 in. to 6 in., 3.10 " Cut Nails— 1 in., \$3.55 per keg. 1 1/2 in., 3.20 " 1 1/2 in. and 1 3/4 in., \$2.95 per keg. 2 in. and 2 1/2 in., 2.80 " 2 1/2 in. and 3 in., 2.65 " 3 in. to 6 in., 2.50 "

Barb Wire and Plain Twist Wire— \$3.50 per 100 lbs. Plain Galvanized Wire— No. 9, \$3.25 per 100 lbs. No. 10, 3.30 " No. 11, 3.40 " No. 12, 3.40 " Black Oiled and Annealed Fence Wire— No. 9, \$3.35 per 100 lbs. No. 10, 3.40 " No. 11, 3.50 " No. 12, 3.55 "

Farm and Church Bells. At prices which will astonish you.

WILKINS & CO., TORONTO.

Maw's Poultry Farm, Winnipeg. BREEDS BEST STRAINS OF UTILITY BREEDS. Thoroughly acclimatized and best adapted to our climate. Have for sale stock and eggs of Mammoth Bronze Turkeys, Toulouse Geese, Imperial Deep-keeled Pekin Ducks, English Rouen Ducks, White Wyandottes, White Leghorns, Silver-Laced Wyandottes, Light Brahmas, Hero Strain Plymouth Rocks, Homing Pigeons from best imported Belgian stock, same as used by the army for carrying messages from beleaguered cities. Large illustrated catalogue, giving list of prizes and medals won at all leading exhibitions, with prices, description and pedigree of stock mailed free on receipt of address. I am North-west agent for the celebrated CYPHERS INCUBATOR AND BROODER. Mr. Cyphers is the discoverer and patentee of the diffusive principle in artificial incubation, thus saving the lives of thousands of chicks that die in the shell in ordinary incubators. It is asbestos-coated and perfectly fireproof. Supplies and regulates its own moisture, and so simple a child can operate it with success. Write for particulars.

Shorthorns 4 Heifers and 2 Young Bulls. Choice ones of Royal Sailor breeding, also Admiral, their stock bull. Also imported CLYDESDALE STALLION. A. & J. CHADBOURN, Ralplton, Man. POPLAR GROVE HEREFORDS THE LARGEST HERD IN CANADA. STOCK OF ALL AGES FOR SALE. J. E. MARPLES, DELEAU, MAN.

HEREFORDS I keep only the best. For stock of all ages. Write or call. WM. SHARMAN, RIDGWOOD STOCK FARM, SOURIS, MAN. Hope Farm Galloways Three good yearlings, home-bred bulls, still for sale. Also one imported from Ontario. To make room for some importations from Scotland, these will be sold at very reasonable prices. Apply T. M. CAMPBELL, Manager, Hope Farm, St. Jean Baptiste, Manitoba.

STEEL BROS., Glenboro, Manitoba, BREEDERS OF Ayrshire Cattle. Choice young stock for sale. 21-2 y-m Bulls. Bulls. Bulls. I WILL undertake commissions to purchase pure-bred bulls of any breed for ranchmen, and will attend to their careful shipment, on the best terms obtainable. Correspondence solicited. WM. SHARMAN, RIDGWOOD FARM, SOURIS, MAN. References: Merchants, Bank, Farmers' Advocate, Near West Farmer, Pure-bred Cattle Breeders' Association.

JERSEY BULLS 2 high-class Jersey Bulls for sale. Also farm lands. H. R. REYES, Midway, Man. PLEASE MENTION FARMER'S ADVOCATE.

SOUTH SIDE FARM CO., White Bear, Minn. Have fine butter-bred Holstein-Friesian bull calves for sale at reasonable prices. Johanna Rue 2nd St. Paul De Kol at head of herd.

Roxey Stock Farm, BRANDON, MAN. J. A. S. MACMILLAN, IMPORTER AND BREEDER OF PURE-BRED Clydesdales, Shires, Hackneys. STALLIONS AND MARES.

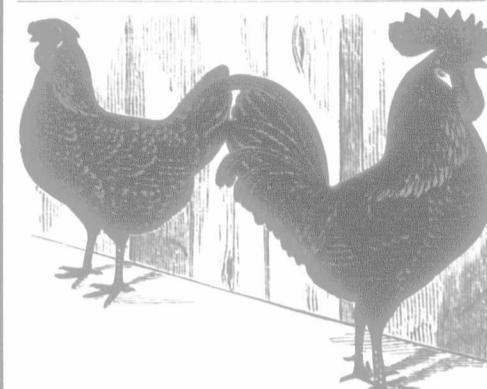
Shorthorn Cattle Shropshire Sheep INSPECTION INVITED. CORRESPONDENCE SOLICITED. Prices Right. FULL PARTICULARS ON APPLICATION. APPLY P. O. BOX 403. Rare Chance to obtain winners for Winnipeg's greatest Industrial yet held. Our entire flock of grand Cotswolds at snap bargain prices. Some good Shorthorn bulls yet. Speak quick. D. HYSOP & SONS, Killarney, Man.

THE GOLD STANDARD HERD OF LARGE ENGLISH BERKSHIRES. Two quality count with you! If so, and you want the best up-to-date bacon type, come to headquarters and place your order. I am now looking orders for spring pigs, bred from large mature stock, from boars weighing 800 lbs. and sows from 400 to 750 lbs. No better Berkshire blood in America. Pairs unpaired, and single animals of either sex supplied. Address: J. A. MCGILL, Neepawa, Man.

D. FRASER & SONS, EMERSON, MAN.

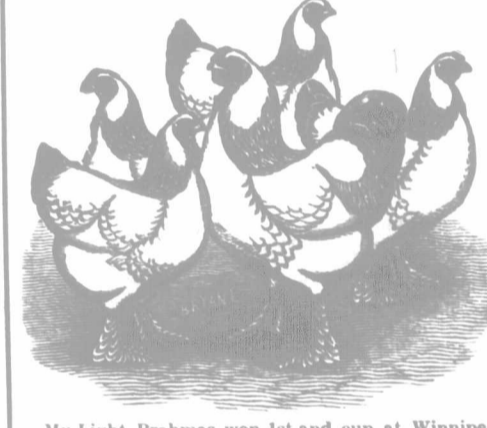
Breeders and importers of Durham Cattle, Shropshire and Southdown Sheep, and Pure-bred Poland-China Pigs a specialty. Young stock for sale. 9-y-m

LEICESTERS! Young rams and ewes for sale. Write or call on A. D. GAMLEY, Box 193, BRANDON, MANITOBA.



KEEWATIN POULTRY YARDS is still headquarters for the leading strains of Black Minorcas. I am prepared this season to furnish eggs for hatching from the best. I guarantee eggs to be true to breed, and the same as I use myself. Special prices for larger quantities on application. Regular price, \$2.00 for 13, \$3.50 for 25. Send your order early. A. M. ROBERTSON, Keewatin, Ont.

Light Brahmas and Anconas.



My Light Brahmas won 1st and cup at Winnipeg Industrial, and my Anconas were 1st-prize winners in U. S. A. Cockerels for sale also. Eggs at \$3.00 per setting of 13. Write for particulars to E. R. COLLIER, NORQUAY ST., WINNIPEG.

Eggs for Hatching: Silver Laced Wyandottes; prizewinners for years and now improved by imported English stock. Eggs \$2.00 per setting; \$3.50 two settings. W. D. LAWRENCE, 354 Donald St., Winnipeg.

PLYMOUTH ROCKS HIGH-CLASS STOCK. WILLIAM LAUGHLAND, Hartney, Man.

Norwood Bridge Poultry Yards, WINNIPEG, MAN. Breeder of high class S. C. B. Minorcas, Houdans, and White Wyandottes; also Bronze turkeys, Pekin Bantams, Pekin ducks. Young stock for sale of all varieties. Write or call.

Eggs for Hatching.

From prizewinning Golden Wyandottes, Black Langhans, Indian Games, Black Cochins, Black Minorcas, Houdans, Plymouth Rocks, White Wyandottes, Golden Fowls. \$1.50 per setting of 15 eggs. Pekin Ducks, \$1 for 13. Bronze Turkeys, \$2 for 11. A few birds for sale. Also fancy pigeons and Belgian hares. Write.

S. LING, Fort Rouge Poultry Yards, Winnipeg, Man.

THE Very Best PLACE FOR THE FARMER'S SON TO SPEND THE WINTER MONTHS IS AT THE Winnipeg Business College. WRITE FOR HANDSOME CATALOGUE (FREE). G. W. DONALD, SECRETARY.

GOSSIP.

In writing to advertise, mention the "Farmer's Advocate."

The announcement has been made that Mr. W. D. Flatt, Hamilton, Ont., has been prevailed upon to hold his next public auction sale of Shorthorns in Chicago on Aug. 7th, when he will sell 60 head of high-class cattle, including part of his great importation of 50 head now in quarantine at St. John, and part of the grand herd of over 70 at present at Trout Creek Farm. From these two sources Mr. Flatt can doubtless make selections of the grandest aggregation of Shorthorns that has ever been offered at public sale in America, and we shall not be surprised if the record of the year for an average of prices is made on Aug. 7th.

Mr. H. Smith, breeder of Shorthorn cattle, Hay, Ont., writes:—The two young bulls I advertise in this issue of the FARMER'S ADVOCATE are both roans of the good thick, useful kind, and they will be sold at reasonable prices. Sales since last report include herd bulls to the following well-known breeders. Thos. Andrews & Son, of Cambridge City, Neb., got an extra good bull in Bar None, by Abbottsford. Capt. T. E. Robson, of Iderton, Ont., got a young bull of rare quality in Lord Strathmore, also by Abbottsford, and out of the grand old Strathallen cow, Rose of Strathmore, while A. D. McGugan, Rodney, Ont., gets the old herd bull, Abbottsford, that has done the Springhurst herd so much good, to head the choice herd he is building up. P. R. Stoffel, a leading Wisconsin breeder, takes the choice young bull, Velvet Jacket, to head his herd, and John R. Richardson, of Lewisville, Alta, who intends building up a herd in Alberta, has begun right by securing Villager, another first-class son of Old Abbottsford.

GOOD PRICES FOR GALLOWAYS.

At a sale of Galloways at Chicago recently, one bull, Miller of Brookside, brought \$570. There was a good demand for the best 20, the average being \$175, but there were too many thin and inferior cattle offered. At the sale of J. S. Goodrich's Galloways, near Goodrich, Kansas, April 19th, the bull, Charley of Goodrich, sold for \$1,225 to M. Winslow, Oskaloosa, Mo. Thirty other animals averaged \$173. At Kansas City, April 20th, Brookside Farm sold 44 head of Galloways at an average of \$130. The cow, Miller of Brookside, and bull calf brought \$570. The highest price for a bull was \$225.

ALEXANDER'S HEIR WON THIRD AWARD.

In our report of the Canadian Horse Show in the FARMER'S ADVOCATE of May 5th, an unfortunate mistake occurred in referring to the class for mature Clydesdale stallions. The description of the fifth-prize horse was credited to Alexander's Heir, imported by Dalgety Bros., London, and owned and exhibited by T. H. Hassard, Millbrook. The facts are, Alexander's Heir won 3rd award, and was worthy of it. He is a draty, well-proportioned horse, with good feet and pasterns. He had been in service, and was, therefore, in better breeding than showing condition.

BORDER LEICESTERS AT GLASGOW.

At the Glasgow Show last month the entry of sheep was not large, but the quality was of a high order. In Border Leicesters, the 1st prize for rams born before Jan. 1st, 1899, went to Mr. John Pollock's £80 Auchinbrain-bred ram. He stood 1st and champion at Kilmarnock this spring, and is keeping his excellence of shape wonderfully well, being as squarely planted on his legs as ever. He is not a very large sheep, but is well covered with flesh throughout. He deservedly secured the championship in the Leicester section. In rams born after Jan. 1st, 1899, Mr. Pollock secured 1st and 2nd with sons of the champion aged ram, the 1st-prize one being placed reserve for the championship. In ewes of the same age, 1st prize went to R. & J. Hunter, Foulton, for the one that was 3rd at Kilmarnock, and 2nd to Mr. R. Picken, Langeside, for one which took 1st at Kilmarnock and was well brought out. Third went to Mr. Peter Houston, and there was no better fleeced ewe hog in the show.

THE QUEEN'S TROPHY.

In connection with the recent visit of Her Majesty Queen Victoria to Ireland, she presented the Irish Royal Agricultural Society with a magnificent challenge trophy (value 100 guineas) to be offered under such conditions as the council considered best calculated to encourage the improvement of Irish-bred cattle. Owing to the fact that the presentation of this Royal trophy was decided on only a few days prior to the opening of the last Dublin Show, exhibitors were quite unaware of the conditions under which it was to be offered for competition, so that the announcement made that it had been decided to give it for the best group of three young Shorthorn bulls (two of them at least to be yearlings) in the nature of a pleasant surprise. When the conditions were announced, much speculation was indulged in as to the likely winners, but the fact that the Messrs. Armstrong, of Ennisceorthy, owned the second and third prize "young" yearlings, and that they also had a very good bull in the two-year-old class, naturally rendered their chances of carrying off this much-coveted trophy for the first time very "rosy." Nor were those who fancied their claim to the honor disappointed, for the judges finally awarded them the cup, with a trio shown by Mr. W. R. Crawford, reserve.

SPRINGBANK FARM.

Shorthorn Cattle, Oxford Sheep, and Bronze Turkeys. Young bulls for sale. JAS. TOLTON, WALKERTON, ONT.

JERSEY BULLS.

High-class show bull, Prince Frank's Son 48758, A. J. C. C., sold order, calved Oct. 20th, 1896. 1st prize at Western Fair London, 1895, as a calf, and 1898 as a yearling. He is a capital breeder, probably the best show bull in Canada to-day. Sire 3 times sweepstakes winner at Western Fair, dam a pure St. Lambert and a good one. Also yearling bull, St. Lambert of Ettrick 5720, A. J. C. C., sold order, calved Jan. 20th, 1899. Handson and thrifty bred. Sire, Stoke Piggot, 2000 pure St. Lambert dam a deep milker. Also handson bull, St. Elizabeth a deep milker, sold order, 1898. Prince Frank's Son; dam, Stella of Ettrick. Price, \$250. Property of W. G. LAIDLAW, Wilton Grove, Ont.

W. G. Pettit & Son, FREEMAN, ONT.

IMPORTERS AND BREEDERS OF

Scotch Shorthorns and Shropshire Sheep

OFFER FOR SALE: 1 imported bull, extra good; 3 imported cows, with calves at their side and in calf again; 6 home-bred bulls, from 5 to 15 months; 10 home-bred cows and heifers. All of breeding age have been bred to imported bulls. Our Shropshires have wintered well, and our lambs this season are a strong, thrifty bunch. 5 rams carried over from last season are in good shape. Correspondence or personal visit solicited. Catalogues on application.

Burlington Junction Station and Telegraph Office, G. T. R., within half a mile of farm.

H. CARGILL & SON, CARGILL, ONTARIO.

The largest herd of Imported Scotch Shorthorn Cattle in Canada.

SEVENTY-SIX HEAD IMPORTED DURING 1899.

13 BULLS.

63 FEMALES.

ALL imported females of suitable age bred before leaving Scotland. Catalogue free. Correspondence or personal inspection invited. Address as above. Cargill Station half a mile from barns, on Grand Trunk Ry.; 70 miles north-west of Guelph.

Catalogue Printing our Specialty.

Many of the best Catalogues in Canada are produced by us. Latest type faces, designs, ornaments, and modern machinery.—Best in America. Up-to-date covers designed by special artists without extra charge.

London Printing & Litho. Company, Ltd., LONDON, ONTARIO.

THORNCLIFFE Stock Farm

The largest stud of Clydesdales in Canada, headed by the Champion Stallion of all ages,

"LYON MACGREGOR."



Stallions and Colts

From the best blood in Scotland and Canada. Ayrshire bulls and heifers from imported stock. Jersey heifers and bull calves, sired by the prize-winning bull, Distinction's Golden. Best milking strains, with good teats. Terms reasonable. A visit to Thorncliffe will well repay you.

ROBT. DAVIES, Thorncliffe Stock Farm, TORONTO.

H. SMITH, Hay, Ont. Shorthorn Cattle.

Two good roan bulls and a fine bunch of heifers FOR SALE. Exeter Station on G. T. R., half a mile from farm.

Scotch Shorthorns FOR SALE.

100 head to select from: 15 grand young bulls by Valkyrie = 21806 =, and cows and heifers of all ages, of the most approved breeding, sired by (imp.) Diamond Jubilee = 28861 =, now at the head of our herd

T. DOUGLAS & SONS, Strathroy Station and P. O. Farm 1 mile north of the town.

SHORTHORN CATTLE AND LINCOLN SHEEP.

Imp. The Baron at head of herd. Seven young bulls for sale—good ones. Also a few females. Stud runs all imported from H. Dudding, Esq.; the same blood as the 1000-guinea ram.

J. T. GIBSON, DENFIELD, ONT.

SCOTCH SHORTHORN BULLS AND HEIFERS

HERD ESTABLISHED IN 1872. Such sires as imported Royal George and imported Warfare have put us where we are. Imported Blue Ribbon now heads herd.

A. & D. BROWN, ELGIN COUNTY, ONTARIO.

W. D. FLATT, Hamilton, Ontario, Can., Importer and breeder of

Shorthorn Cattle.



GOLDEN FAME (IMP.)—26056—(72610).

My herd is one of the largest in America, both imported and Canadian-bred. A very choice selection of both sexes always on hand for sale. Personal inspection invited. Address all communications:

JAMES SMITH, Mgr., Millgrove, Ont.

R. R. Station and Telegraph, Hamilton, on main line Grand Trunk RR.

Hillhurst Farm.

ESTABLISHED 1861.

Scotch Shorthorns.

SIRE'S IN SERVICE:

Scottish Hero and Joy of Morning.

BRED BY W. BUTTIE, COLLYNDE.

Oldest Stud of Hackneys in America. Shropshire, Dorset Horn and Hampshire Down Sheep.

M. H. COCHRANE.

Hillhurst Station, Compton Co., P. O.

Maple Lodge Stock Farm

ESTABLISHED 1854.

SHORTHORNS—An excellent lot of young bulls, and a special value in young cows and heifers in calf to our imported Knuckle Duster.

LEICESTERS—Imported and home bred—the best.

ALEX. W. SMITH,

MAPLE LODGE P. O., ONT.

R. & S. NICHOLSON

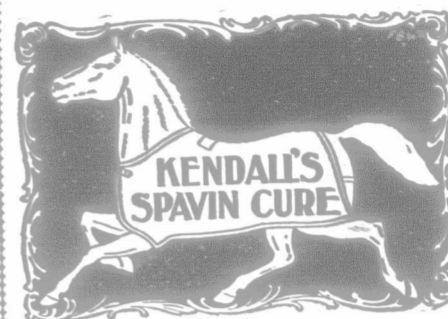
SYLVAN P. O., PARKHILL STATION.

Scotch Shorthorns, imp. and home-bred.

The Imp. Clipper bull, Chief of Stars, heads the herd. Eight extra good 2-year-old heifers for sale, in calf to Chief of Stars (72215). Inspection invited.

PLEASE MENTION FARMER'S ADVOCATE.

Don't Guess At Results.



This man knows what he did and how he did it. Such endorsements as the following are a sufficient proof of its merits.

Oshawa, Minn., Feb. 22, 1898.

Dear Sirs:—Please send me one of your Treatise on the Horse, your new book as advertised on your bottles, English print. I have cured two Spavins and one Curb with two bottles of your Kendall's Spavin Cure in four weeks.

FRANK JUBERIEN.

Price, \$1; six for \$5. As a liniment for family use it has no equal. Ask your druggist for KENDALL'S SPAVIN CURE, also "A Treatise on the Horse," book free, or address DR. J. B. KENDALL CO., ENOSBURG FALLS, VT.

GOSSIP.

Tom C. Ponting & Sons, Moweaqua, Ill., at their auction sale of Herford cattle, April 19th, sold 61 head at an average of \$243. The highest price for a cow was \$1,010, and for a bull, \$390. The lowest price was \$110 for a July bull calf.

The fifteenth annual meeting of the Holstein-Friesian Association of America will be held at the Iroquois Hotel, Buffalo, New York, on Wednesday, June 6, 1900, at 10 o'clock a. m., for the election of officers and the transaction of any other business which may legally come before it.

Mr. Robert Hunter, farm manager for the W. W. Ogilvie estate, Lachine Rapids, Quebec, has been in Scotland buying high-class Ayrshires to strengthen the already strong herd at Rapids Farm. Amongst his purchases is the four-year-old bull, Douglasdale, winner of first prize and the champion-hip at Glasgow this spring. Several prizewinning cows and heifers have also been added this spring.

POOR RED POLL SALE.

Breeders of Red Polled cattle cannot have derived very much encouragement from the result of a sale of this breed recently held at Ipswich. In all 36 lots were catalogued for this dispersal, but so very poor was the demand experienced that the best cows offered only made 17 1/2 gu. The others sold at prices ranging from 10 gu. to 15 gu., and 16 gu. For bulls also the prices were very disappointing, the general run of values being from 12 gu. to 15 gu., and 16 gu. Only one of the lots submitted during the day was a year-old calf belonging to Her Grace the Duchess of Hamilton—made over 20 gu. This calf was purchased by Mr. W. M. Champion; the price was 27 gu.

ABERDEEN-ANGUS SALES.

At the combination sale of drafts from eight herds of Aberdeen-Angus cattle held at Omaha, Nebraska, May 1st and 2nd, excellent prices were realized: 38 females sold for an average of \$319.35; 113 head offered averaged \$283. The consignments of Chas. Escher & Son, Botna, Iowa, 27 head averaged \$123.70, and the 9 head contributed by Heatherton Farm, West Lebanon, Ind., averaged \$32.22. The highest price made at the sales was \$760 for Escher's three-year-old cow, Ida Eclipse, by Moon Eclipse. Another cow from the same herd made \$765, and the bull, Clausman Chief, sold for \$885, and Black Cap Monarch for \$500; 16 head sold for \$500 and upwards.

NOTICES.

Dominion Line Steamships.—We direct the attention of intending visitors to Europe to the advertisement in this issue of the Dominion Line Steamships, whose agents are David Torrance & Co., 17 St. Sacramento St., Montreal. Their vessels are substantial, modern in every respect, and rapid. Passengers by this line can obtain comfortable, rapid passage from Montreal at moderate rates.

A Free Notebook.—Wm. Cooper & Nephews, the celebrated "Cooper Sheep Dip" manufacturers, have issued a very handy 1900 pocket calendar and memorandum book, to which they advise us our readers are welcome while the supply lasts. All you have to do is drop them a post card with your address and request for same. Their office is at 142 Illinois St., Chicago, Ill. The supply of such a useful little book surely cannot last very long.

"Keeping Cows for Profit."—Our readers interested in butter dairying, and there are a host of them, may obtain free for the asking a copy of the above practical little treatise on up-to-date dairying. Besides statistical and other information, it contains a great deal of salubrious and concisely-worded advice on home butter-making and factory patronage. It was very carefully prepared for the De Laval Separator Co., and may be secured from their representatives in Canada, the Canadian Dairy Supply Co., which has offices at 32 Commis-sioners St., Montreal, and 236 King St., Winnipeg. It is well printed, illustrated and bound in illuminated paper cover. The chapter on skin milk and its uses, and the centrifugal cream separator, are particularly interesting.

Big Crops

of Big Potatoes

result from applying about 100 lbs of Nitrate of Soda

Nitrate of Soda

per acre just after the potatoes are well up. Then, too, the potatoes are smoother and more salable. Insures a profitable crop. Our books tell about its use on potatoes and the profits produced. Send for free copies before you plant to John A. Myers, 12-R John St., New York Nitrate for sale by fertilizer dealers everywhere.

Write at once for List of Dealers.

West's Fluid

Has cured Contagious Abortion in several of the finest herds of prize stock in the country; but as it would injure the reputation of the breeders, they will not give written testimonials. These statements are facts.

Write for circular on this disease, specially prepared by a V. S. Headquarters for 'STANDARD' Sheep Dip. Manufacturers: The West Chemical Company, TORONTO, ONT. Agents Wanted.

Kicking Cows.

Stop your cows kicking, increase the flow of milk by the use of SORE TEAT SALVE. Positively prevents chapped teats, warts, and caked bag or udder. Price, 25c., 50c., and \$1, per tin. WM. MOLE, Veterinary Surgeon, 443 Bathurst St., TORONTO.

John Miller & Sons, BROUGHAM P. O. and TELEGRAPH OFFICE.

OFFER FOR SALE....

4 Imported Clydesdale Stallions. 10 Scotch-bred Shorthorn Bulls. ....PRICES REASONABLE. Claremont Stn., Pickering Stn., C.P.R. G.T.R. Correspondence Invited.

Bonnie Burn Stock Farm

Forty rods north of Stouffville station, Ont., offers for sale Shorthorn bull calves and yearling heifers, Shropshire lambs and shearlings (both sexes), on D. H. RUSSELL, Stouffville, Ont.

SHORTHORNS

I have six young females for sale - three are in calf and three old enough to be bred. These heifers have four or more crosses of the finest Booth sires, on imported Marr and Gordon Castle foundation, a desirable and needed line of breeding. D. ALEXANDER, Bridgen, Ont.

HAWTHORN HERD OF DEEP-MILKING SHORTHORNS.

We are offering 5 young bulls for sale, of first-class quality, and AI breeding. Wm. Grainger & Son, - Lindsay, Ont.

JAS. DORRANCE, SEAFORTH, ONTARIO.

BREKDER OF Shorthorn Cattle and Berkshire Pigs Young stock always for sale. Spring Grove Stock Farm

SHORTHORN CATTLE and LINCOLN SHEEP.

Shorthorn Cattle and Lincoln Sheep. Herd prize and sweepstake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by Topsman =17847=, champion at Winnipeg, Toronto, London and Ottawa, 1899. High-class Shorthorns of all ages for sale. Also prize-winning Lincolns. Apply T. E. ROBSON, Ilderton, Ont.

SCOTCH SHORTHORNS and BERKSHIRES.

Choice young bulls and heifers for sale. Also Berkshire pigs of the most approved breeding. Meadowvale Stn., C. P. R. Six miles from Brampton, G. T. R. S. J. PEARSON & SON, Meadowvale, Ont.

GOSSIP.

In addition to the Shorthorns named in a paragraph in our May issue as having been purchased in Britain by Mr. Robert Miller, Stouffville, Ont., for Mr. E. S. Kelly, of Springfield, Ohio, there were several fine Scotch-bred yearling heifers from the herd of Sir John Gilmour, including Cineraria, by Brave Archer; Nettie 5th, by Fitz Barnett, and Dunmore Beauty, by Prince of Saquahar. Mr. Kelly is a new figure in the Shorthorn world, having made his fortune as a manufacturer, and is establishing a high-class herd on the old homestead farm at Springfield.

GLASGOW SPRING SHOW.

The 4th annual show of the Glasgow Agricultural Society was held April 19th. In the class for Clydesdales, Mr. John Pollock's Hiawatha was placed first in the section for mature stallions. Casabianca, owned by Mr. John Crawford, was second. Herbert Webster's Lord Fauntleroy won third prize. In 3-year-old stallions, Mr. Webster's Baron Kitchener was first, Mr. Kilpatrick's Royal Gartley's Heir second, and Mr. Scott's Prince of Cornwall third. In 2-year-old colts, first went to Mr. Dunlop's Sylvander, second to Mr. Clark's Pride of Blacon, and third to Mr. Park's Baden-Powell.

THE FAIRVIEW BERKSHIRES.

Mr. George Green, Fairview, Ont., renews his advertisement of Berkshire hogs in this issue. Mr. Green is one of the oldest and most successful breeders and exhibitors of Berkshires at the principal shows in Canada, and has spared no expense in securing high-class breeding stock, having imported and purchased many of the best of the breed that has come to this country. He is an excellent judge, and knows a good one when he sees it, and keeps and breeds that sort, having aimed at producing a lengthy, deep-sided type, with a good class of bone and standing well up on their toes. Parties requiring a good pig or any number will do well to write him for prices and descriptions. The present and prospective prices of hogs in the market make it an object to procure the best class for producing high-quality bacon at a profit to the producer, and in this regard the Berkshire stands second to none.

ROYAL DUBLIN SHOW.

At the spring show of the Royal Dublin Society, over 300 Shorthorns competed. The £100 challenge cup, presented by Her Majesty the Queen in commemoration of her visit to Ireland, was this year awarded for the best three Shorthorn bulls owned by the exhibitor, and was won by Mr. W. Armstrong, Gally House, Enniscorthy, for Landman, Stamp of Riches, and Prince Rufus. The Chaloner plate was awarded to the roan 2-year-old bull, Royal Duke, bred and exhibited by the Queen, sired by Prince Victor, and a grandson of the Royal champion, New Year's Gift. He is described as well built, with a style about him and quality of hair and flesh that is very pleasing. The Shorthorn Society's prize of £20 for the best yearling Shorthorn bull bred in Ireland went to Mr. Armstrong for his Stamp of Riches.

LEICESTERS AT AYR SHOW.

In the aged ram class, Mr. Pollock's £80 Auchinbrair-bred ram, who was first and champion at Kilmarnock and Glasgow, repeated his victory again; Messrs. Hewitson, Ballerston, took 2nd and 3rd. In yearling rams, Messrs. Hewitson's were placed 1st and 2nd. The former stood 1st at Castle Douglas, and was sired by a Knockdon ram. After these the awards were puzzling, and the question was asked, "Are we ever to have a standard fixed in the Border Leicester breed?" Mr. Dunlop's ram, that could get no higher than 7th at Kilmarnock, was here placed 3rd; while Mr. Pollock's two that stood 1st and 2nd at Kilmarnock and Glasgow, got 4th and 6th at Ayr. For ewes, Mr. Pollock was 1st; 2nd and 3rd going to Mr. Jas. Dunlop, Midland, Fenwick; and 4th to R. Picken, Langside. Yearling ewes were headed by one from Knockdon, very stylish, with a breezy head, clean, hard bones and a very nice fleece. Second and 4th went to Mr. Pollock for two that got no place at Glasgow.

AYRSHIRES AT GLASGOW SHOW.

The quality of the Ayrshires exhibited at the spring show at Glasgow is reported as having been of a very high order. In aged bulls, Mr. John McKean's Douglassdale was selected for first place, and silver cup and medal. He is a 3-year-old, bred by Mr. McKinlay, of Hillhouse, and is a son of Douglas Chief and Snowdrop. Mr. James Howie's Kohinoor, of Hillhouse, was second, and perhaps only in depth of flank could the winner be said to beat him. Mr. A. Mitchell was third with Comander, a son of First Choice. There were but two entries in 2-year-old bulls, and first went to Mr. Howie's Strongbow, second to Mr. Barr's The General. Yearlings were a strong class. First went to Gen. White, and second to Imperial Chief, both owned by Mr. Thos. Scott, and sired by Prince Imperial of Netherhall. Seven aged cows in milk were catalogued, and the Kilmarnock winner, Gipsy 3rd, bred and owned by Mr. Wm. Howie, again took precedence. Mr. T. C. Lindsay's Nellie Sloth of Aitkenbrae, came second, and Mr. Howie's Gowan of Burnhouses third. Three-year-olds in milk were headed by James Laurie's Beauty IV., a beautiful red heifer, which also won the silver cup. Mr. Lindsay was second with his red and brown Lily 3rd of Aitkenbrae, and Mr. Duncan third with Flecky, by The Laird. In the aged cows-in-calf class, Mr. Bauehop's Madeline, the reserve for the cup, was a popular winner. The second was a useful cow from Mid-Acrog, which was stated to have been purchased at a large figure by Mr. Pilkington, of Cavens. Mr. Laurie was third with Kate 5th. Messrs. McAlister secured first in a strong class of 3-year-old queys in calf. Another from Mid-Acrog was placed second. There were 18 entries for the Derby for 3-year-old queys, the winner being Mr. Jas. Laurie's champion Beauty IV. Mr. S. Fleming led in champion Beauty IV. Mr. S. Fleming led in 2-year-old heifers, either in calf or milk, Mr. Jas. Laurie being second. The heifers not in calf made a very fine class, the competition being exceedingly keen. Mr. And. Mitchell's Mary and Mr. John McKean's Lady Montrose ran each other very closely, but after a close scrutiny by the judges, the latter was given precedence. Mr. Wardrop's Catherine Douglas Gipsy Girl being the leader, and Dewdrop second. Both are sired by Traveller's Heir. Mr. Scott, Netherhall, was third with Lady Beatrice, a very sweet heifer by Prince Imperial.

HORSEMEN! THE ONLY GENUINE IS

GOMBAULT'S CAUSTIC BALSAM.

Not genuine without the signature of The Lawrence-Williams Co. Sole Importers & Preparers for the U.S. & CANADAS. CLEVELAND, O.

The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle, SUPPRESSES ALL CAUTERIES or FIRING. Impossible to produce scar or blemish. Every bottle is warranted to give satisfaction. Price \$1.50 per bottle. Sold by Druggists, or sent by Express, charges paid, with full directions for its use. Send for free descriptive circulars. THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

5--Shorthorn Bulls--5

From 9 to 15 months. Also a few choice yearling and 2-yr.-old heifers, among which are grand, thick-fleshed and choicely bred animals, mostly solid red colors. Speak quick, for they will not last long. G. A. BRODIE, BETHESDA, ONT.

FOR SALE:

The roan Scotch-bred Shorthorn bull, Golden Robe 20396, By Knight of St. John (17102); dam, Golden Bud (imp.) 23015. Having sold most of my females, I can dispose of Golden Robe. He is sure and quiet. ISRAEL GROFF, Alma, Ont.

40 HEREFORDS.

Bulls, Cows, and Heifers, for immediate sale. Alfred Stone, 5 Douglas St., GUELPH, ONT.



75 HEAD High-quality, Early maturing Herefords Prizewinners, Producers of Money-makers in the feed lot.

The blood of "Corrector," "Eureka," "Ancient Briton," and "Rupert," on an "Anxiety" foundation. Send for illustrated catalogue. H. D. SMITH, COMPTON, QUE.

Herefords for Sale

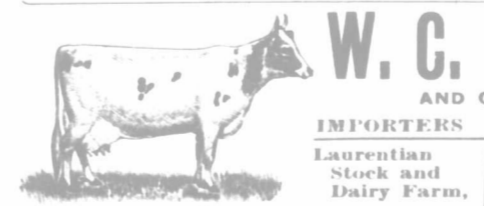
Choice young bulls, from 1 to 2 1/2 years old, and show bull, 3 years. Also Moreton Lodge Farm, Next O. A. College. Plains Farm, Arkell, Containing from 200 to 250 acres each. The F. W. Stone Stock Co., GUELPH, ONT., CANADA.

Wm. Willis, BREWER OF - NEWMARKET, ONT.

Jersey Cattle (St. Lamberts). Some fine young bulls for sale at farmers' prices, if taken at once. Also Cotswold sheep.

FOR SALE:

Jersey bulls from tested and prizewinning dams, and sired by our champion bull. They are fit to head any show and dairy herd. (See particulars in "Gossip" column this issue.) Also a number of young A. J. C. cows, and a few unregistered cows and heifers - grand family cows. Write now for prices, stating what you want. B. H. BULL & SON, Brampton, Ont. G. T. R. & C. P. R. Stations, 20 miles from Toronto.



W. C. Edwards AND COMPANY, IMPORTERS AND BREEDERS

Laurentian Stock and Dairy Farm, NORTH NATION MILLS, P. Q. Ayrshires, Jerseys, Shropshires, Berkshires.

Our excellent aged herd of Ayrshires is headed by our noted imported bull Cyclone. Tam Glen heads the young herd, and Fawn's Son 2nd of St. Anne's heads the Jerseys. The young stock are all from time-tried dams. A. E. SCHRYSER, Manager. We can be reached either by steamboat, the C. P. R., or C. A. R.; the C. A. R. making connection with the G. T. R. at Coteau Junction. Rockland is our station on all lines. 7-1-y-om-

GLEN ROUGE JERSEYS.

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

JERSEY CATTLE

That will put Money in your pocket. MRS. E. M. JONES, Brockville, Ontario, Can. Box 324.

Maple Glen Stock Farm.

Special Offer: An August bull calf, sired by Gem Pietertje Hengerveld Paul DeKol, a rich bull, bred by President Matteson, Utica, N. Y. Has for dam the sweet show heifer, Gilly Flower 2nd, an undefeated winner in 1898 as a yearling, also 1st Ottawa and 2nd Toronto, 1899, as a two-year-old, where she was also a member of sweepstake aged herd. She gave over 50 lbs. milk per day on show grounds as a two-year-old. Also a bull two years old past; dam was half-sister to our old stock and show bull. The sire of some of the best in world to-day. We still have a few females from 3 months to 6 years old for sale - one a dairy test winner, of the Teake family. Prices reasonable for quality. C. J. Gilroy & Son, Glen Buel, Ont. Brockville, on C. P. R. or G. T. R.

MAPLE HILL HOLSTEIN-FRIESIANS

Three Yearling Heifers, sired by Colanthus Abbecker 2nd, and in calf to Daisy Teake's King (brother to Daisy Meake's Queen, the great test and show cow). Three Bull Calves, sired by De Kol 2nd's Paul De Kol Duke, the great butter-bred bull; dams, the fine show cows, Lady Akkrum 2nd, Cornelia Artis, and Madge Merton. G. W. CLEMONS, St. George, Ont.

WE WANT TO SELL A FEW

Holstein Heifers, coming 2 years old. They are of the richest and largest producing strains, fine individuals, and bred to as good bulls as there are living. We have a few bull calves and yearling bulls also for sale. HENRY STEVENS & SONS. LACONA, OSWEGO CO., N. Y.

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Is headquarters for Holstein bulls. They are going fast; be quick if you want one. In writing, state age, etc., preferred. GEO. RICE, Currie's Crossing, Ont. Oxford Co.

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By sending them to Meadows Farm, Carleton Place, to see J. Yuill & Sons' stock. Eighty-four Ayrshires, second to none in the world for milk production. Thirty-two Shropshire ewes and two rams which are from prizewinning stock. Fourteen Berkshires of the bacon type; and a grand flock of B. P. Rocks. Also two good Collie pups, 4 weeks old. J. YUILL & SONS, Props., Carleton Place.

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One bull 5 months and young calves 2 to 3 weeks, from some of our best imported cows. Will sell at reasonable prices. Address: ROBT. HUNTER, Manager to W. W. Ogilvie, LACHINE RAPIDS, QUE.

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Breeders of FOR SALE: AYRSHIRES, 1 yearling and 6 bull calves from 2 to 8 months old. TAMWORTHS, Bears and sows, 6 to 8 months old, and sucking pigs. Improved BERKSHIRES. Booking orders for young pigs. R. REID & CO., Hintonburg, Farm 1 mile from Ottawa. Electric cars to farm. om PLEASE MENTION FARMER'S ADVOCATE.



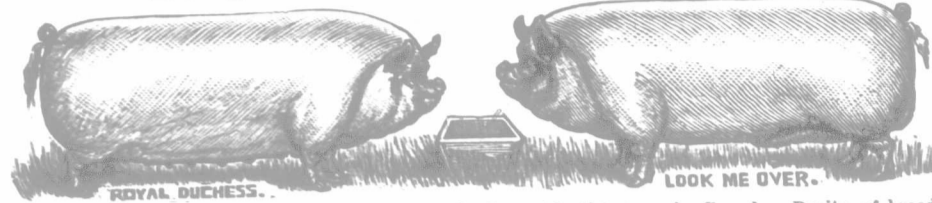
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The imported Missie bulls, Marquis of Zenda and Scottish Pride, at the head of herd, assisted by British Knight. We have a few extra good young bull calves that will be ready for the coming season. JOS. W. BARNETT, Manager.

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The largest herd of pedigreed Yorkshires of the large English type in Canada. Purity of breed, size, and general excellence is my motto. One hundred awards with one hundred and five exhibits at 7 shows in 1889. A choice selection of young boars and sows of all ages for sale; also boars fit for service, and pregnant sows. Fifty breeding sows, of which 25 (twenty-five) are imported; also three imported stock boars bred by such noted breeders as Sanders Spencer and Philo L. Mills. Am also using two Canadian-bred stock boars, first prize at Toronto in 1896-99. Express charges prepaid. All stock carefully shipped and guaranteed as described. Telephone, Millgrove, Ont. Telegraph 254 Bay St. S., Hamilton, Ont. om

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ALL high-class, pedigreed stock. Those desirous of purchasing thoroughbred animals should write for particulars at once. Orders booked now in rotation for present and future deliveries. Address—



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GREAT ENGLISH  
**Pedigree Sales**  
July, August, and September, 1900.  
WATERS & RAWLENCE, Salisbury, Eng.  
Will sell by auction during the season upwards of

**50,000 PURE-BRED EWES, LAMBS and RAMS,**  
Including both rams and ewes from the best registered prize-winning flocks in the country. Commissions carefully executed. Address: om

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Secretary of the National Sheep Breeders' Association,  
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Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered.  
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CLYDE AND SHIRE HORSES.  
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LEICESTER SHEEP.

A choice lot of Leicester ewes and rams with superior quality and as good blood as is obtainable. My motto, "The best is none too good."  
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Newly imported from the greatest English breeders. Home-bred rams and ewes of best quality. Scotch Shorthorns and Clydesdale horses for sale at moderate prices, and in large quantities.  
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**IMPORTATION**  
of Shropshires for Fairview Farm in July, 1900. J. Campbell will select and import. Only choice rams and ewes will be brought out. The good ones that please customers first and last.  
We breed them and import them.  
Orders can now be booked for imported stock, and some good rams are now in hand.  
JOHN CAMPBELL, Woodville, Ont., Canada.

## GOSSIP.

In writing to advertisers, mention the "Farmer's Advocate"

### SCOTTISH HACKNEY SALE.

The 6th annual sale of Hackneys, property of Mr. A. Morton, took place at Gowanbank, Darvel, April 26th. Snap Shot, a 5-year-old gelding, sold for 160 guineas; Fiona, a 4-year-old mare, for 230 guineas; and Cicely, a 10-year-old mare, for 300 guineas, which were the top figures. Sixteen ponies averaged £50; 32 harness horses, £27, and 11 brood mares, £20.

### AYRSHIRES AT AYR.

The exhibition of Ayrshires was the best seen for some years. In the Derby of April, 1900, for cows calved in 1897 there were 53 entries and 25 prizes. The first prize went to Senorita of Old Graitney, owned by A. & W. Kerr, of Greta. She is a typical Ayrshire cow of large frame, with a very good vessel and first-class teats, and is the last of the produce of Peter of Whitehill, a bonnie sweet cow, whose vessel lacks the breadth and thickness of the 1st winner, Mr. Wm. Howie, Burnhouse, Ayr, was there with Gipsy 3rd, the winner at Kilmarnock. In the class for aged cows in calf, Mr. Bauchop's was a clear 1st, with Madeline II., a cow of very good quality; Messrs. McAlister were 2nd with Moss Rose, by Yellow Chief, and Mr. Drennan 3rd with a white-legged cow. In 3-year-olds in milk, Messrs. Kerr were 1st with Senorita, followed by Mr. Laurie with Beauty IV., and Mr. Dunlop's Lady Mary 3rd, and Mr. Hunter's Princess 4th—all as in the Derby. In the classes for bulls, the leader in aged bulls was Mr. Osburn's Gigantic Stunner; 2nd, Jas. Howie's Kohinor; 3rd, Andrew Mitchell's Commander. Two-year-old bulls—1st, Jas. Howie's Strongbow; 2nd, T. W. & R. Lindsay's (Wigton) Gen. Buller; 3rd, Thos. Barr, Kilmarnock. Yearling bulls—1st, Thos. Scott's Gen. White; 2nd, Robt. McKinlay's Prince George 2nd; 3rd and 4th, Sir Mark McTaggart-Stewart; 5th and 6th, Jas. Howie. In the milking competition for cows any age, 1st and champion was owned by W. C. Alexander, whose cow gave 48.46 lbs. milk in the day, and the 2nd, Mr. Littlejohn's, gave 45.64 lbs. The championship for this went to Gigantic Stunner, and for females to Senorita.

### THE SALE OF THE HILLHURST HACKNEYS.

The auction sale of the Hon. M. H. Cochrane's Hackney horses at Toronto, April 23rd, furnished another confirmation of the opinion we have long held, as the result of observation, that during and at the place of a show or exhibition is about the worst possible time to hold a public sale of stock. Theoretically it seems opportune to hold a sale at a time and place where people interested in the particular class will be pretty sure to be gathered, though they have not come for the special purpose of attending the sale. Reduced railway fares and everything seems favorable; but experience proves that many things that look reasonable in theory fail to work out satisfactorily in practice, and this is one of them. We have never known a successful sale of one nearly satisfactory held at the time and place of an exhibition. And so some schemes which may work fairly satisfactorily in one country may be found totally unsuited to the conditions of another country. Mr. Cochrane's sale was extensively and judiciously advertised. His horses were of a high order of merit, and he deserved a good sale, having done his part honorably, as he always does, but anyone who knows the character of the stock offered will readily assent to the statement that they could have been sold privately for nearly if not quite double the amount realized at the sale. The magnificent imported stallion, Barthorpe Performer, in the prime of life, and for whom it is said that \$5,000 was at one time offered, was sacrificed at \$950, and 18 other high-class animals, including 3 imported mares, which must have cost \$1,000 each, were knocked down at an average of \$172. It is, however, an ill wind that blows no good to anyone, and if the seller suffered, the buyers benefited, and we are glad to know that nearly all the animals remain in the Dominion. Hon. T. R. Black, of Amherst, N. S., being the largest purchaser, and Dr. Kendall, of Sidney, C. B., securing a grand pair—Mr. Robt. Davies, Toronto, and Mr. E. C. Atwill were also fortunate purchasers. We give below a list of the animals, with prices and purchasers:  
Barthorpe Performer, imp. ch. s., foaled 1893, by Garton Duke of Connaught—Mr. Jackson, Buffalo, \$950.  
Majestic II., b. s., 2 years, by Hayton Shales—T. R. Black, Nova Scotia, \$260.  
Everingham, b. s., 2 years, by Hillhurst Sensation—A. Galbraith, Janesville, Wis., \$200.  
Strathcona, yearling, b. c., by Hayton Shales—T. R. Black, \$165.  
Lady Lynn, imp. foaled 1886, roan mare, by Grest Shot—Robt. Davies, \$200.  
Nancy, imp. b. m., foaled 1888, by Matchless of Londesboro—T. R. Black, \$225.  
Cameo, imp. ch. m., foaled 1893, by Danegelt—T. R. Black, \$215.  
Lady Shales, b. m., foaled 1895, by Hayton Shales—E. T. White, Pembroke, \$190.  
Lady Thixendale, b. m., foaled 1895, by Maxwell—A. T. White, \$175.  
Miss Lynn, b. m., foaled 1891, by Hayton Shales—Dr. Kendall, Sydney, C. B., \$190.  
Danish Maid, b. m., foaled 1895, by Royal Dane—Dr. Kendall, \$155.  
Queen Dagmar, br. f., 3 years, by Barthorpe Performer—Dr. McCoy, St. Catharines, \$300.  
Queen Louise, ch. f., 3 years, by Barthorpe Performer—T. R. Black, \$25.  
Queen Alexandra, ch. f., 3 years, by Barthorpe Performer—W. H. Comstock, M. P., \$175.  
Danish Lady, roan f., 3 years, by Danish Duke—Robt. Davies, \$185.  
Viola, ch. f., 3 years, by Barthorpe Performer—Mr. J. Carruthers, Tilsonburg, \$195.  
Lady Minto, roan f., 2 years, by Barthorpe Performer—Robt. Davies, \$325.  
Goddiva, ch. f., 2 years, by Barthorpe Performer—E. C. Atwill, Goderich, \$195.  
Lady Melgund, b. f., yearling, by Barthorpe Performer—E. C. Atwill, \$80.  
Total, \$4,315; average for 19 head, \$227.60.

FOR FATTER SHEEP AND MORE WOOL

**DIP YOUR SHEEP IN COOPER'S SHEEP DIP**

BENEFITS THE FLOCK ERADICATES INSECTS AND DISEASE

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Still the favorite dip, as proved by the testimony of our Minister of Agriculture and other large breeders.

**For sheep.**  
Kills ticks, maggots; cures scab; heals old sores, wounds, etc., and greatly increases and improves growth of wool.

**Cattle, horses, pigs, etc.**  
Cleanses the skin from all insects, and makes the coat beautifully soft and glossy.

Prevents the attack of Warble Fly.

Heals saddle galls, sore shoulders, ulcers, etc. Keeps animals free from infection.

**No danger, safe, cheap, and effective**  
Beware of imitations.

Sold in large tins at 75 cents. Sufficient in each tin to make from 25 to 40 gallons of wash, according to strength required. Special terms to breeders, ranchmen and others requiring large quantities.

SOLD BY ALL DRUGGISTS. SEND FOR PAMPHLET.  
**Robert Wightman, Druggist, Owen Sound.**  
Sole agent for the Dominion. om

## DUROC-JERSEY SWINE.

We have a fine lot

First-Class Stock

of all ages and either sex. Address,

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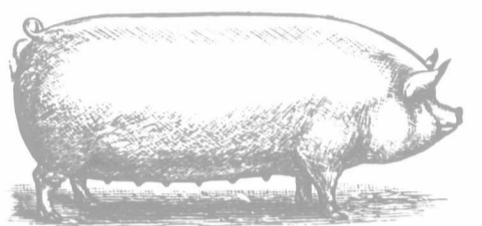
## Snelgrove Berkshires.

When others fail to please you with a good pig, come to us. Our herd is bred from the best strains of the Large English Berkshires. We now have a very promising lot of young pigs, April farrow, sired by Colonel Brant 5350 (first prize under 12 months, Toronto, 1900) and Dictator 5911. Write for prices.

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om **SNELGROVE, ONT.**

## We lead, others follow.



**Oak Lodge** Yorkshires have a special type of their own, and are acknowledged to be the highest class of bacon hogs. Grand sweepstakes over all other breeds on foot and for dressed carcasses at Provincial Winter Show. Won all herd prizes offered at the largest Canadian exhibitions.  
Improve the quality of your pigs by securing some of Oak Lodge blood. Quality! quality! our motto. All stock fully guaranteed. om

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## Large White Yorkshires.

Am offering during this month a grand lot of boars and sows ready for breeding, pairs supplied, not akin from show stock; also several sows in pig to imported boar. Young pigs from 2 to 3 months old, all of the most improved bacon type. Registers furnished. Express prepaid. Address:

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BOX 290. om **WOODSTOCK, ONT.**

**Place Your Egg Orders . . .**  
with the **Lucknow Poultry Yards** and you will not be disappointed with hatches and the quality of stock. Our matings for 1900 far surpass any previous matings in Buff and White Cochins, L. Brahmas, Buff and Silver Wyandottes, White and Barred Rocks (exhibition cockerel and pullet mating in Barred), Buff Leghorns, Red Caps, Black Minorcas, Black Spanish, G. Seelright, and Pyle Game Bants, Eggs, \$2.00 per 13; \$5.00 per 15. We have strong Reds, \$1.00 per 13; Pekin and Rouen ducks, \$1 per 11. Our stock won for us over 1,000 prizes in the past 4 years, which should be sufficient proof that we understand mating, etc. Satisfaction guaranteed.  
**J. C. LYONS, Lucknow, Ont.**  
N. B.—Miss Coldwell's Barred Rocks are now owned by us.

**BARRED PLYMOUTH ROCKS.**  
\$50 silver cup and gold medal winners at the "Ontario," Peterboro, 1900. More prizes than any four breeders at Toronto, London and Ottawa Fairs, 1899. Blood will tell.  
Eggs \$3.00 per 15.  
\$5.00 per 30.

**ASKIN POULTRY YARDS, London.**  
GEO. W. MILLER, PROP.

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**The BEST and the CHEAPEST.**  
**95 Per Cent.** Hatches are often reported by those who use these incubators. One reason for this record is absolute uniformity of temperature in egg chamber; correct instructions for operating; has fireproof lamp. A great mistake it would be to purchase an Incubator or Brooder without first getting a copy of our 118-page catalogue. Send 3 cents for illustrated catalogue of Incubator, Brooder, Poultry and Poultry Supplies.  
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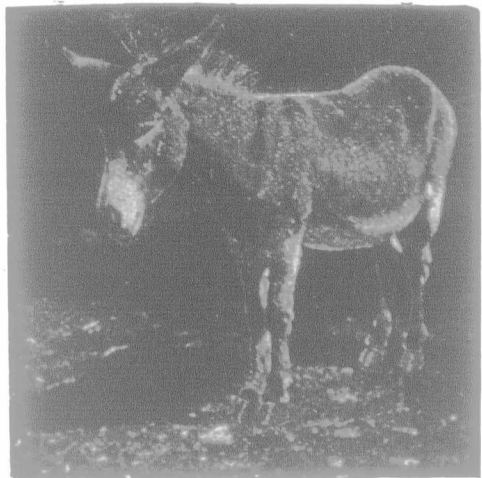
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Sheep size, per 100.....\$1.50  
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Punch and Pliers for attaching labels to ear, each \$1.00. Name on one side and any numbers wanted on reverse side. F. S. BURCH & CO.

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A SPECIFIC For wind, throat and stomach troubles. Ninth year. Used in veterinary practice prior. \$1 per can. Dealers or direct. Book and return free. Newton Horse Remedy Co. (D), Toledo, O. Trade supplied by Lyman Bros. & Co., Toronto.

# A \$3000. STOCK BOOK FREE

It contains 183 large colored engravings of Horses, Cattle, Sheep, Hogs and Poultry with an illustrated veterinary department. The engravings cost us \$3000. We will mail you one copy free, postage prepaid, if you write us and answer these four questions: 1st—Did you ever use "International Stock Food" for Horses, Cattle, Sheep or Hogs? 2nd—Is it for sale in your town in 25-lb. pails? 3rd—How many head of stock do you own? 4th—Name this paper, "International Stock Food" is a safe vegetable stimulating tonic and blood purifier. It fattens stock in 30 days less time and saves grain. Aids digestion and assimilation. Thousands of farmers feed 500 to 2000 lbs. every year. It makes colts, calves, lambs and pigs grow very rapidly and only costs \$3.33 3 Feeds for One Cent. Makes hogs weigh 300 lbs. at 6 months. It cures and prevents many diseases. Always sold on a guarantee to refund your money if it ever fails. Cheap and inferior imitations are on the market. Our dealers give this book free with "International Stock Food" in pails or barrels.

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We own for our "International Stock Food Farm" three Stallions, Buttonwood 2:17, by Nutwood 2:18, International Stock Food, by Hartford 2:22, and Naheola 2:22, by Lockhart 2:25. They eat "International Stock Food" every day. It saves grain.

### GOSSIP.

Messrs. Snell & Lyons, Snelgrove, Ont., make a change in their advertisement in this issue, in which they offer choice young pigs of April litters, bred from high-class stock of the large, lengthy English type of Berkshires. The outlook for the hog trade is now so encouraging that advantage should be taken of the opportunity to improve the class and quality of stock.

At the sale of the old-established herd of Shorthorns, the property of Mr. J. C. Toppin, Musgrove Hall, Penrith, conducted by John Thornton & Co., April 26th, 50 cows averaged £35 13s. 7d., and 7 bulls £70 11s., or an average on the whole of £40. The top price of the sale was 320 guineas for the bull, Lord George, which was greatly admired and started at 150 guineas, running rapidly up to 300 guineas, Lord Polwarth bidding against Mr. Tanner, of Leicestershire, who secured him.

At a sale of Shorthorns from the herd of Mr. Wm. Graham, Redland's Bank, Penrith, Scotland, April 25th, 51 animals made an average of £43. The highest price (125 guineas) was made by a roan cow of the Laurestina tribe, and was bought by Mr. Tanner, of Leicestershire. The next highest (90 guineas) was paid for a cow of the same family. The highest price for a bull was 80 guineas for Duke of Bolton, a roan two-year-old, bought for Tasmania.

Mr. Harland Pickering, Brampton, Ont., has purchased from Graham Bros., Claremont, the grand imported Hackney stallion, March Past, winner of 1st prize at the Winnipeg and Brandon exhibitions last year. March Past is a bay horse of big type for the breed, with grand action, fine quality and good temper, and is said to be of the same type as the sire of the high-priced horses in the Prince of Wales' sale at Sandringham last year. The farmers of Peel County are to be congratulated on having so excellent a horse brought into their district, and should not fail to avail themselves of his services.

German farmers have taken more generally to hog-raising, and in some parts supplies have been heavy enough to admit of shipping a few to England. This is the first time in a good many years that Germany has had hogs to export. However, this shipment is of no consequence, as the supplies of live stock in the whole empire are not sufficient for the requirements of the demand. During the past year, Germany imported 385,000 cwts. of fresh beef and 217,000 of fresh pork. The former was 35 per cent. more than the previous year, and over four times as much as in 1897. Pork, on the other hand, decreased nearly 30 per cent.

A successful sale of Herefords was held at Kansas City, Mo., April 25th and 26th, at which drafts from the herds of Messrs. Armour, Funkhouser, Sparks and Logan were disposed of, 115 head selling for an average of \$283.53. The highest price (\$1,000) was for the Armour cow, imp. Prudence, bought by George Tamblin, Kansas City. The top price for a bull was \$425, and the lowest price in the sale \$140. It is said the character and quality of the cattle was first-class, and the prices made were somewhat disappointing when compared with those of the Nave sale; but these are good prices and the average should be satisfactory.

April 19th, a sale of Shorthorns was made from the herd of Hon. F. J. S. Folgarbe, Osberton Hall, Workson, at which 57 head made an average of £37 19s. 3d., Mr. John Marr, Aberdeen, paying the highest price (100 guineas) for the 2-year-old bull, Merryman, by Leonidas, out of Merry Selina. Mr. Dudding took Bright Selina, the highest price cow, at 80 guineas. Merry Selina, dam of Merryman, brought 67 guineas, and Capt. Duncombe got Riby Maritana at 65 guineas. Arabduke Leonidas, a 2-year-old by Leonidas, was offered at a reserve bid of 300 guineas as it is intended to enter him for the Royal Show at York, and afterwards to use him in the herd; but as he failed to reach the reserve, he did not find a purchaser.

LIVE STOCK AT THE "PAN-AMERICAN." We understand that, so far as plans have already matured for the live stock department at the Pan-American Exposition, Buffalo, in 1901, the dates for the exhibit of the various classes will be as follows: Cattle—Aug. 14 to Aug. 21. Horses—Aug. 28 to Sept. 7. Sheep—Sept. 11 to Sept. 21. Swine—Sept. 25 to Oct. 5. Poultry and Pet Stock—Oct. 9 to 19. The above dates are not absolutely final, but it is thought, will not be materially changed. Mr. F. A. Converse, Elliott Square, Buffalo, N. Y., is the Superintendent of live stock and dairy, who will furnish information.

Forage and Fodders.—Secretary F. D. Coburn, of the Kansas State Board of Agriculture, proved himself worthy of the high appreciation of the stock farmers of his and other Southern States every time his quarterly reports appear. The last report of the Board, issued for the quarter ending March 1st, 1900, deals with Forage and Fodders, and does it well. The crops dealt with are Alfalfa and other clovers, corn, cow peas, Kaffir corn, rape, sorghum, soy beans, vetches, and a large list of grasses. The report is of peculiar value to southern farmers, and useful to many farther north.

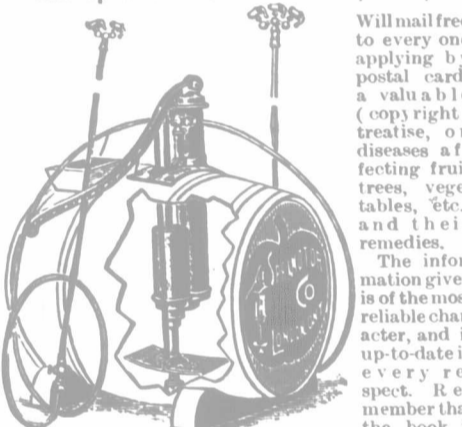
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We don't know. The first was put up 13 years ago and is in perfect condition yet. We use special wire—none other like it. Page No. 11 Wire is as strong as common No. 9. Over 500,000 farmers using Page fencing. They find it to be the best and cheapest. Send for our new pricelist.

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Will mail free to every one applying by postal card, a valuable (copyright) treatise, on diseases affecting fruit trees, vegetables, etc., and their remedies. The information given is of the most reliable character, and is up-to-date in every respect. Remember that the book is given away. Write now, and kindly mention the FARMER'S ADVOCATE.

Certificate of Official Award. This is to certify that at the contest of Spraying Apparatus held at Grimsby under the auspices of the Board of Control of the Fruit Experimental Stations of Ontario, in which there were eleven contestants, the Spramotor, made by the Spramotor Co., of London, Ont., was awarded first place.

H. J. HARRIS, Judges. SPRAMOTOR CO., 68-70 KING ST., LONDON, CANADA.

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make the finest equipment in Canada for producing expert operators. The

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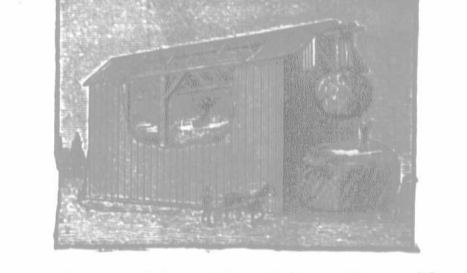
### Safety Incubators & Brooders



Are the best, most reliable, and cheapest machines you can buy. Fire-proof heaters, fireproof lamps, absolutely self-regulating, supply their own moisture, and are fully guaranteed. For circular, etc., address the manufacturer.

### J. E. MEYER, KOSSUTH, ONT. 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 & CO., Ingersoll, Can.

### FENCE MACHINE

The GEM still holds the record—120 rods 10" wire fence in 10 hours. Price, \$5.00. Coiled Spring and other wire for sale in any quantity. Write—McGregor, Banwell & Co., WINDSOR, ONT.

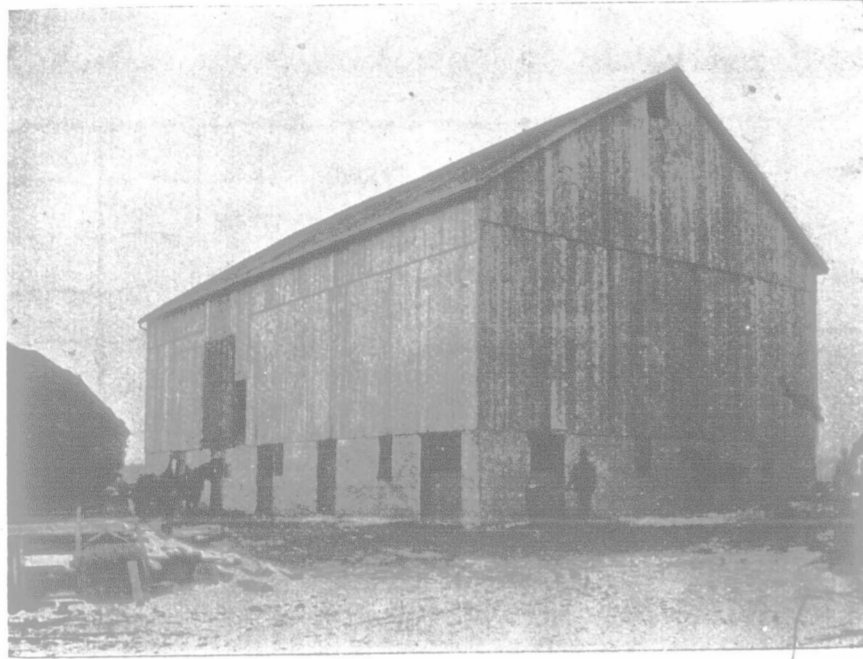
### \$3 a Day Sure

Send us your address and we will show you how to make \$3 a day absolutely sure; we furnish the work and teach you free; you work in the locality where you live. Send us your address and we will explain the business fully, remember we guarantee a clear profit of \$3 for every day's work, absolutely sure, write at once. IMPERIAL SILVERWARE CO., Box 419, WINDSOR, ONT.

## A GOOD BARN.

With walls 11 feet high, and arched root-house under driveway. Walls

Built With **THOROLD CEMENT**

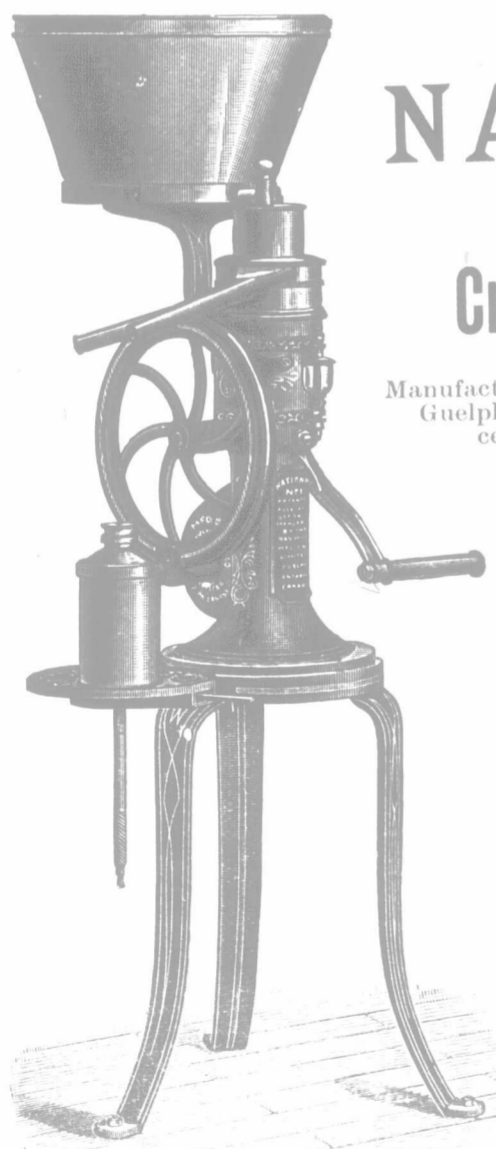


Barn of John McFarlan, Leesboro, Ont. Size, 50 x 80 feet; walls 11 feet high. Walls and Floors built with Battle's Thorold Cement.

**READ WHAT MR. MCFARLAN SAYS:**

ESTATE OF JOHN BATTLE, CEMENT MANUFACTURERS, THOROLD, ONT.: LEESBORO, ONT., DEC. 22, 1889.  
Dear Sirs,—It is with pleasure I testify to the good qualities of your Thorold Cement, having used it in building the concrete walls of my barn, size 50 x 80, walls 11 feet high, with root-house under driveway 11 x 42 feet, arched roof. The work was done under the supervision of Mr. Walter Lambert, and the floors under Mr. N. B. Hagar. I consider the work is a credit both to them and to you. I have no hesitation in recommending your Cement to those requiring its use. JOHN MCFARLAN.

**Estate of John Battle, Thorold, Ontario.**



## THE NATIONAL FARM Cream Separator

Manufactured by the Raymond Mfg. Co. of Guelph, Limited, manufacturers of the celebrated Raymond Sewing Machines.

THE National is an up-to-date machine, leading all others in separating cream by centrifugal force. It is the farmers' choice, because it runs easy, skims fast and clean, and makes a perfect cream, containing any per cent. of butter-fat desired. It is also easier to clean than any other. The National is built of the very best material suitable for the construction of a high-speed machine, and with proper care should last a lifetime. The bearings are interchangeable and easily adjusted. Every machine is guaranteed to do good work, and a trial of the "National" is solicited before purchasing any other. The already large sale of the "National," and the growing demand for it, shows how much the Canadian farmers appreciate a Canadian-made machine that does its work so easily and well, and at the same time returns such a large profit on the small investment. Ask for the "National"; try it and buy it.

**THE CREAMERY SUPPLY CO.,**  
GUELPH, ONT.,  
General agents for Ontario.

**MESSRS. CAMPBELL & GLENN,**  
381 TALBOT ST.,  
LONDON, ONT.,

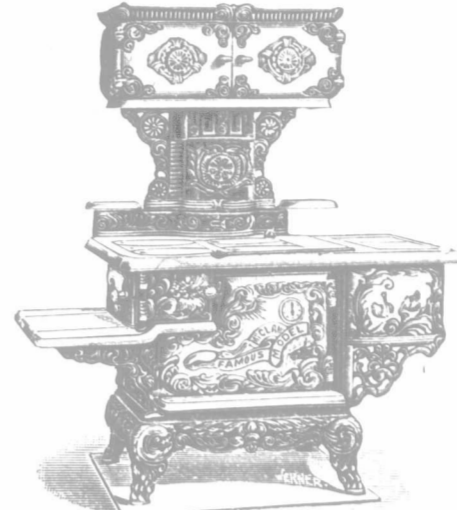
Agents for the Counties of Middlesex and West.

"NATIONAL" NO. 1 HAND POWER.  
Capacity, 330 to 350 lbs. per hour.

**The Raymond Mfg. Co'y of Guelph, Ltd.**  
GUELPH, ONT.

## SAVE FUEL BY USING A

## Famous Model Range FOR WOOD.



CAN BE FITTED FOR COAL IF REQUIRED.

**THERMOMETER** in oven door shows EXACT COOKING HEAT for pies, cakes, bread, etc.  
**VENTILATED OVEN** allows of a constant circulation of PURE WARM AIR.  
**STEEL OVEN BOTTOM** (that cannot crack or warp) heats oven quickly.  
**CEMENTED BOTTOM** causes even baking of food.  
**ASBESTOS OVEN FRONT** prevents heat escaping.

**EXTRA HEAVY FIRE EXPOSED PARTS.**  
**SECTIONAL FIRE-BOX LININGS** and **STOVE TOP** THAT CANNOT WARP.

**THE M<sup>C</sup>CLARY MFG. CO.,**

LONDON, TORONTO, MONTREAL, WINNIPEG, VANCOUVER.

## Strathy's "HINGE" Stay Field Fence and SINGLE POLE Gates

THE 20th CENTURY FENCE.



SHOWING HINGE MOVEMENT OF STAYS UNDER PRESSURE STAYS CANNOT BEND & WILL SPRING BACK TO PLACE WHEN PRESSURE IS REMOVED.

A fence competitor says "It has no equal."

A trial will convince you also.

We have since purchased the rights for the Maritime Provinces of Canada.

The product of years of practical experience, careful study and experiment under the hardest climatic conditions of heavy snow and severe frost in winter and high temperature in summer, with a variation of 150 degrees. Our Spring Post meets perfectly the requirements and overcomes all the difficulties of contraction and expansion, under a variation of 180 degrees of temperature, and has besides a reserve capacity of as much more to provide for great strain and to automatically take up the stretch in the wires. Our "Hinge" Stays so act, when under pressure of snow or other weight, that when the weight is removed the fence springs back to place, with Stays unbent and fence uninjured. A system all our own and unlike any other. We use heavy wires—high-carbon spring-steel wire of highest quality—but our system is cheaper and the completed cost less than any other fence. Write for full particulars, and state fully your requirements.

**THE STRATHY WIRE FENCE CO.,** Welland, Ont.  
om Agents of ability wanted in every part of Canada.  
We sell the parts to assemble in the field or ship in the roll ready woven at 31 cents per rod up.

## Government Analysis.

LABORATORY OF INLAND REVENUE,  
OFFICE OF OFFICIAL ANALYST,  
Montreal, April 8, 1895.

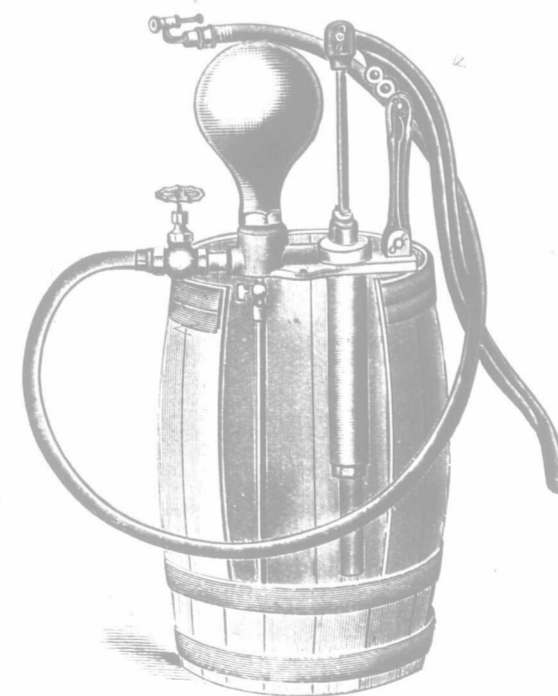
"I hereby certify that I have drawn, by my own hand, ten samples of the

## St. Lawrence Sugar Refining Co.'s

EXTRA STANDARD GRANULATED SUGAR, indiscriminately taken from ten lots of about 150 barrels each. I have analyzed same and find them uniformly to contain:

99 <sup>99</sup>/<sub>100</sub> to 100 per cent. of pure Cane Sugar, with no impurities whatever."

(Signed) **JOHN BAKER EDWARDS, Ph. D., D.O.L.,**  
Prof. of Chemistry and Public Analyst, Montreal.



## THE GEM SPRAY PUMP.

Why Superior to Others.

- A—All working part Brass.
- B—Is not top-heavy.
- C—Cylinder 12 inches long.
- D—Two kind of agitators.
- E—Made to stand HARD WORK.

It pays to buy a reliable article at a fair price.

Price (Cash with Order), **\$12.50**

See our agent, or write us direct.

**ONTARIO WIND ENGINE & PUMP CO.,**  
LIMITED,  
TORONTO, - ONTARIO.

Please Mention Farmer's Advocate.



**SHEEP SHEARING REVOLUTIONIZED.**

**Chicago Sheep Shearing Machine**

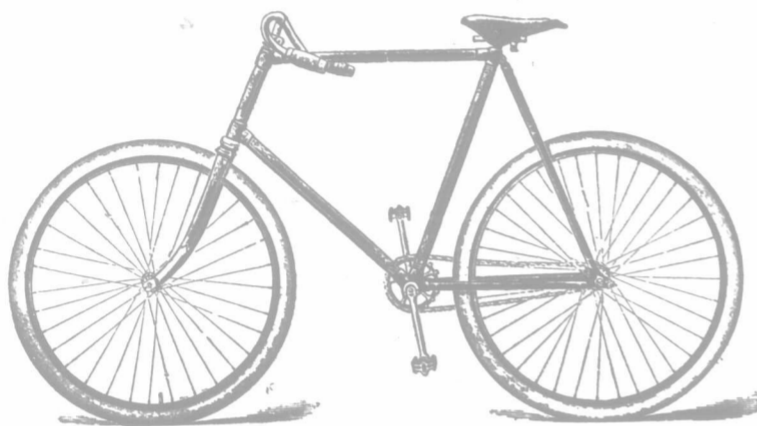
STEWART'S PATENT. PRICE, \$15.00.

The only Sheep Shearing Machine ever invented. The day of the old fashioned hand shears is past. Over one million sheep shorn last season with this machine. Thousands of testimonials. No sheep owner can afford to shear the old way. Saves from one-half to one pound wool from each sheep. Pays for itself the first season. Be humane and don't butcher your sheep. Requires no experience to operate. Send for large illustrated circular.

CHICAGO FLEXIBLE SHAFT CO.,  
158-160 Huron St. --- CHICAGO, ILL.

**"Famous" Bicycles**

**\$29.50**



Best wheel in the market this year. Lowest price in Canada. For sale to cash buyers only. Price for gents or ladies' models only \$29.50. Terms, \$4.50 with the order, and the balance when the wheel arrives. Each wheel is equipped with the famous Morgan & Wright, best quality, guaranteed, double-tube tires. Each wheel is black in color, and complete with tools and all equipment. Order at once before the stock is exhausted. Send \$4.50 with your order, and then you thoroughly examine the wheel before you pay the balance. Address

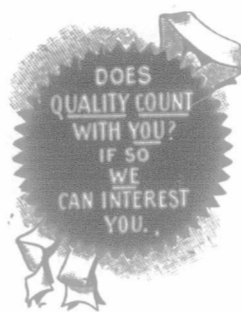
**Stanley Mills & Co., Hamilton, Ont.**

**MASSEY-HARRIS**

CULTIVATING SEEDING

HAY MAKING AND HARVESTING

**MACHINES**



**Your Income**

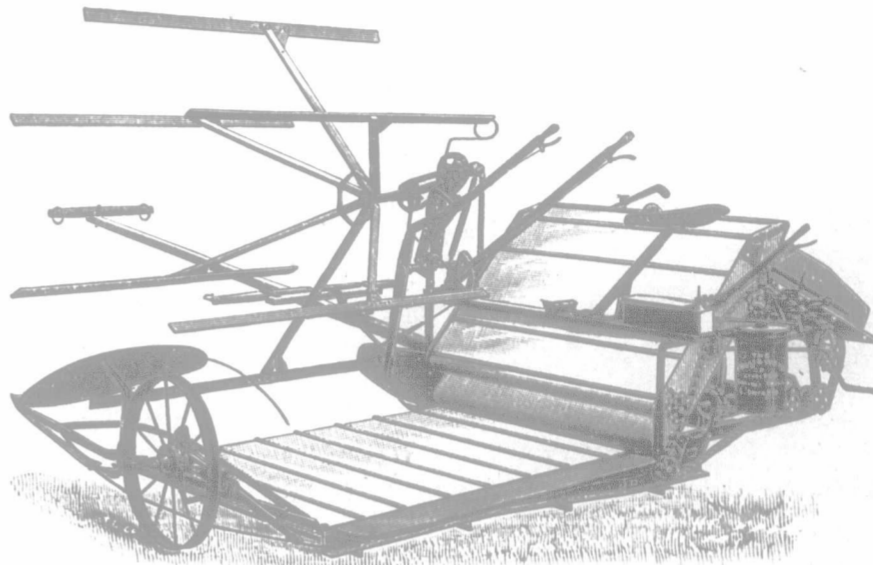
Is regulated by the QUALITY of your crop.

**Your Crop**

Is regulated largely by the QUALITY of the machinery you use.

**Did You Ever Consider This?**

If You Have, QUALITY Must Count With You.



We Guarantee the QUALITY, You Have the SATISFACTION.

HEAD OFFICE AND WORKS:



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Toronto. London. Winnipeg, Man. Montreal, Que. St. John, N.B. Truro, N.S.

**BINDER**

**TWINE**

**FARMER'S**

PURE MANILA, 650 FEET,  
SPECIAL MANILA,  
TIGER,  
STANDARD.

Farmers! Don't be taken in. There is none "just as good." These twines will not bunch at the knotter, and a Binder will run all day without stoppage, thus saving time, annoyance and a "lot o' cussin'."

We pack our twine in bags of the size of ordinary grain bags, and we are not ashamed to put our name upon it. Don't take any other.

**CONSUMERS' CORDAGE CO.**

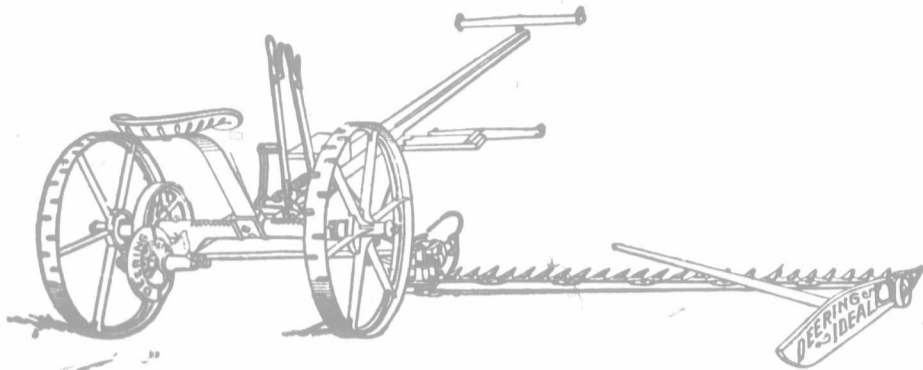
Limited.

MONTREAL.

**DEERING**  
BINDER TWINE  
New Twine from New Mills

**DEERING**  
HARVESTER OIL  
Keeps the Bearings Cool

## THE MACHINES THAT MADE AMERICA FAMOUS.



DEERING IDEAL MOWER WITH BICYCLE BEARINGS.

Competition claims to have just as good. Only one best, that

DEERING IDEAL.

### Deering Harvester Company,

Main Office and Factory :  
CHICAGO, U. S. A.

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**DEERING**  
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BINDER TWINE  
New Twine from New Mills

*Good housekeepers say that Blue Ribbon Ceylon Tea besides being the best is by far the most economical. Try it.*



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Is made easy on application to  
**The Hudson's Bay Stores.**

No Instrument is more popular in Canada to-day than the

# Bell Piano

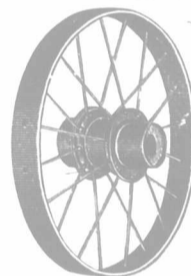
And there is no better to be had.

The orchestral attachment renders possible the effect of sixteen different stringed instruments. It is used only in the "BELL." Send for free booklet, No. 40, it tells all about it.

Built to last a lifetime.

The BELL ORGAN & PIANO CO., Limited, GUELPH, ONTARIO.  
Or J. L. MEIKLE & CO., Agents, WINNIPEG, MAN.

### Low, Wide-Tire Wheels FOR WAGONS.



Made to fit your axles. Every farmer should have a set of these low, wide-tire, wrought-iron wheels for drawing hay, grain, corn, manure, stone, etc. They are lighter, stronger, and much cheaper than wooden wheels. Write for prices.

**Dominion Wrought Iron Wheel Co.,**  
TORONTO.

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IF SO, TO YOUR ADVANTAGE TO WRITE  
**Dick, Banning & Co.,**  
WINNIPEG, MAN.

**"SAFE LOCK" METAL SHINGLES**  
THE KIND THAT ARE WEATHERPROOF  
COST LITTLE MORE THAN WOOD SHINGLES  
AND ARE LIGHTNING AND FIRE PROOF  
ASK FOR FREE SAMPLES

METAL SHINGLE & SIDING CO  
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If you are going to the Old Country, or sending for your friends, apply to our nearest railway or ticket agent, who can supply outward and prepaid tickets at lowest rates.

Steamers leave Portland, Maine, every Saturday; St. John, every Wednesday; New York, every Wednesday and Saturday.

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