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# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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VOL. XXXII.

LONDON, ONT., AND WINNIPEG, MAN., DECEMBER 15, 1897.

No. 444.

**The Farmer's Jubilee.**  
This year of grace a Lady old,  
With sweet and stately mien,  
Mov'd 'mongst her people manifold,  
Who cried—"The Queen! The Queen!  
May Heaven bless her!"—till it roll'd—  
The anthem of the free—  
And kindred all  
Took up the call  
To crown her Jubilee.



Then we of Canada, with pride,  
Drew closer 'round the throne,  
To meet the kin from far and wide,  
Where'er the flag is flown;  
And, ranging near Britannia's side,  
How narrow seem'd the sea!—  
All thine was mine,  
All mine was thine,  
And ours the Jubilee!

Now let me sing a simple strain  
Of one in lowly guise,  
Who wrought to make this broad domain  
Smile under changing skies,  
Throughout Victoria's glorious reign,  
Till now the fruits we see—  
A nation great—  
To celebrate  
The Farmer's Jubilee.

A backward look through sixty years—  
Behold a shanty lone—  
A heaver-meadow with the spears  
Of brown sedge overgrown—  
A forest whence the woodman hears  
The wolves howl hungrily—  
There only dreams  
Could give him gleams  
Of far-off Jubilee.



Now from his mansion, o'er the hill,  
He hears the sheep's low bleat,  
Or down the valley, near the mill,  
He sees the green, green wheat;  
The Christmas chimes peal out "good-will"  
To all on earth that be,  
The Christ above  
Makes bright with love  
The Farmer's Jubilee.

No glitt'ring squadrons clatter by,  
For him no cannon roar,  
Yet there is that beneath the sky  
Has power to please him more:—  
The Iron Horse that strives to fly  
To lade the ships for sea,  
His Klondyke farm,  
His own right arm,  
Make up his Jubilee.

Plover Mills, Ont. ROBERT ELLIOTT.

**The Outlook for the Canadian Farmer.**

BY JAS. W. ROBERTSON, AGRICULTURAL AND DAIRY COMMISSIONER.

I thank you for the invitation to write a New Year's letter for the Christmas Number of the FARMER'S ADVOCATE. I have no fitness for prophesying "on the outlook," no inclination to offer fault-finding advice, and no time to write a public letter without a purpose.

I send you and all your readers my very best good wishes for a Good New Year. The promise of good times is on everybody's lips. That itself is part of them. Hopefulness is particularly helpful in bettering one's circumstances. It does not lead to extravagance of expectation or preparation, when joined to the prudence which has been learned in the school of hard times, debts and disappointments. I fear many farmers have too much acquaintance with these stern teachers. It may have been because they looked for health, happiness, and profits in wrong directions. These three should be the sure rewards of all intelligent, productive labor. I repeat my New Year wish, varying its form of expression, and pray that in 1898 these blessings may be more abundant in the farm homes of Canada.

How are they likely to become ours during the year?

**Crops.**—The changes are rung on this as "an age of specialists in farming and other callings" so often that specializing is in danger of becoming the fad that leads to loss and failure. A larger number of crops (not varieties of grain) is what is wanted on nearly every farm. Fewer acres under cultivation, larger yields per acre, and some of all suitable crops for sale or for feeding, is the kind of farm management that can be depended on to yield revenue that will be larger than the necessary expenditure. There is safety in numbers in that sense. Man is not omnipotent, and cannot control many of the conditions which make good or poor crops. Something fails nearly every year: There has never been a year when everything failed.

The quantity and quality of the crops settle the capacity of the farm for carrying live stock. A fairly large acreage for succulent feed should be prepared. That may be in the form of Indian corn ensilage or Indian corn fodder, turnips, mangels or carrots. Sunflowers have given in the last three years an average of over seven tons of heads per acre. Where horse beans do not thrive, trials might be made with early varieties of Soja beans.

**Live Stock.**—The outlook is brightening, and still is none too bright. It will pay most farmers to keep a smaller number of animals unless they are all good. Six good cows will yield more profit than a dozen ordinary milkers, and the saving in labor would be very considerable. It will pay to keep only a comparatively small number of good animals of all kinds until others as good or better can be added by rearing or by purchase. Plenty of light in the stables is a great promoter of health and vigor. Pure air, warmth and cleanliness promote comfort, and comfort is the sum of all the treatment which puts an animal in the way of yielding the largest possible profit.

This is not the place in which to discuss at any length methods for keeping live stock. It occurs to me to say that in the new year and all coming years, profits will be derived more from improvement of individual animals than from increase of numbers. The general purpose cow has been the butt of a great many writers' wit, wisdom, and ignorance. When a farmer finds her, she is one of his best servants and profit-makers.

If the ordinary farmer on a one-hundred-acre farm will aim at selling annually \$200 worth of milk and its products, five fattened steers, \$50 worth of turkeys, chickens, and geese, \$25 worth of eggs, and an average of three fattened pigs every month, weighing from 100 to 200 pounds each, he will find

himself getting from these combined sources a revenue of about \$750 a year, without counting in an occasional good horse, lambs, sheep, and wool. The sale of grain, some hay, apples and small fruits should more than meet working expenses. Such farming would give a variety to the occupations and interests leading to business contentment. Consequent happiness might come with the profits.

The unrest and worry of life in these later years arise largely from the uncertainties of revenue. What the workman, the business man, and the professional man crave for is security of opportunity to earn a living and a competence. In farming this may be met, so far as it may be under present conditions, by growing a reasonably large number of kinds of crops as sources of revenue; by providing a large number of different products for sale, such as milk, beef, pork, butter, poultry, eggs, fruits, animals; and by securing as many well-established market connections as possible. A systematic effort along these lines, rather than fitfully hoping for large things from any one special crop or class of stock, will enable Canadian farmers to get more out of life and more out of farming than it has hitherto yielded.

**Markets.**—To some extent markets are controlled by speculators in products; but the demand for consumption and the actual and prospective stock of the great staple products are such as to encourage the hope that higher prices for wheat and other cereals will rule than have been paid during the last five years.

Great Britain is undoubtedly the chief market for the surplus of farm products. Perhaps not much more than twelve per cent. of the value of all farm products in Canada are exported annually. Cheese is a notable exception; the prices which the goods exported fetch to a very large extent regulate the prices which can be obtained for what is consumed in the country. It is therefore of the utmost importance that the largest possible prices should be obtained for what goes to the markets outside of Canada. The British merchants stick to a thing which they have learned to like. They will pay higher prices for a brand of cheese which has given them satisfaction for several years than they will for an untried brand, even if the latter should be better. In the fruit markets the buyers will wait and bid strongly for the brand of a packer and shipper whose pack has pleased them and their customers well in the past. Such a permanent and preferential trading connection is what should be sought for by every producer and exporter. The British market affords a relatively high price for the very best of everything in the pink of fine condition; but it gives ruinously low prices for second-rate quality.

With cold storage service provided on railways, at warehouses, and on steamships, the transportation difficulties have been to some extent removed. Distance from market no longer necessarily means deterioration of the product. The main use of cold storage is to preserve perishable products, such as butter, tender fruits, meats, poultry, eggs, and to a less extent cheese and apples, on their way to the ultimate consumer. The less time they are on the way the better. Cold storage has in itself no power to improve the quality of farm products. It can only preserve them from deterioration. It will be unfortunate if it is used very largely for the holding of products off the market in their proper season. While it has a limited usefulness in lengthening out the period during which products can be marketed, and giving the seller a wider chance to choose his time of selling, its main service is in permitting products to get to their markets in the very best condition, and, as a rule, that should be as soon after they are ready to be eaten as practicable.

I find that I have let my letter of New Year greeting almost grow into an article on the agriculture of Canada. Instead, I should have said more about the weather, on which subject no one ever expects to communicate anything to another which he did not know quite as well before. Perhaps that conclusion may be come to on what I have written in this letter. Its purpose is not to offer instruction, but in a practical way to wish the farmers of Canada a Prosperous New Year!

Ottawa, 9th Dec., 1897.

**Would Not Miss It for \$5 a Year.**  
WM. BOLAN, Ontario Co., Ont., when renewing his subscription, Nov., 1897, says: "I am well pleased with the ADVOCATE, and would not be without it for five dollars a year."



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## A Noteworthy Feeding Trial.

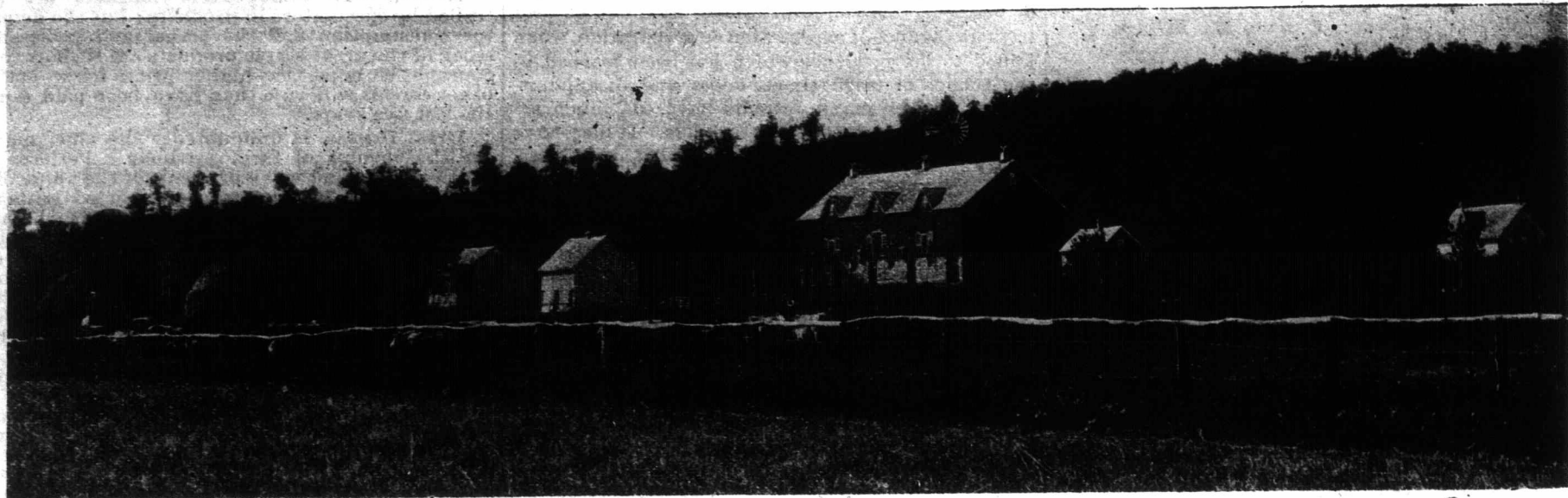
Early in the year we published a report on the comparative results of fattening steers tied or loose, as tested at the farm of Hon. Mr. Mulock, in York County, under the superintendence of Mr. Wm. Linton. The results given in favor of the latter were so remarkable, though in general borne out by several other prominent feeders whose letters we published on the subject, as to suggest the advisability of further tests, both privately and at some of the public experimental institutions, for the purpose of verification. We are glad to note that Mr. Wm. Rennie, Farm Superintendent at the Ontario Agricultural College Farm, has an experiment now under way on this very important subject. At this writing the loose cattle, given the same food as those tied, were reported to be showing the greatest gain. The final result will be awaited with great interest by cattlemen everywhere.

## An Unfounded Official Slander.

We give prominence to the letter of the Canadian Agricultural and Dairy Commissioner, Prof. James W. Robertson, correcting the unfounded statement contained in the recently published annual report of the United States Secretary of Agriculture, reflecting upon the character of Canadian butter shipped to England, and given widespread publicity in various American dairy and other publications. Indignant protests have also reached us from prominent Ontario and Manitoba dairymen. No injurious preservatives, or preservatives of any kind, are used in the manufacture of Canadian butter. Attempts have been made by United States parties to introduce by

## Good Move by the Dominion Minister of Agriculture.

It will be interesting and gratifying to stock breeders throughout the Dominion to learn that to a deputation which waited on Hon. Mr. Fisher, Minister of Agriculture, at Brantford, Ont., last week, it was intimated in response to the expressed wish of many breeders desirous of introducing fresh blood into their herds, that the regulations respecting quarantine have been so far relaxed as to admit of the importation of cattle from Great Britain which have passed the tuberculin test applied by approved veterinarians in that country without being required to submit to a repetition of the test on arrival at Canadian ports, though subject to the 90-day quarantine against pleuro-pneumonia. This is simply placing Britain on the same footing as the United States in regard to protection against tuberculosis. And it may seem strange that for so many months the motherland has been discriminated against in this matter as compared with a foreign country. The only explanation we can see is the fact that in regard to the neighboring country a mutual agreement was entered into in order to facilitate trade and to allay any fears which might possibly exist as to the danger of introducing that ailment, which we apprehend as it becomes better understood will be less feared. It is gratifying to the breeders to realize that in response to their associated representations this obstruction to the progress of their business has been happily removed. It affords us genuine pleasure to announce that we have received intelligence of the shipment of a dozen young Shorthorn bulls by Mr. John Isaac, of Markham, Ont., from Glasgow, as the first fruits of the



THE HOME OF NELSON BEDFORD, GLENCROSS, MAN.

## A Year of Good Cheer.

Such has been the record of 1897, the best year in many ways of a decade to the Canadian farmer—such the wish of the FARMER'S ADVOCATE for its readers everywhere in 1898. To its realization we shall, as publishers and editors, bend our best energies, with full confidence that hereafter, as before, our efforts will be generously appreciated. That this will prove mutually advantageous, no reasonable man can doubt. To promote better and more remunerative farming, and a still higher and more intelligent type of home life on the farm, shall be our steadfast purpose. We bespeak for the Canadian farmer and farmers everywhere a year of good cheer, and shall be glad to know that this Christmas Number of the ADVOCATE is a fair assurance to our readers that we will do our part.

## Nature Study in the Schools.

Mr. John Dearness, Public School Inspector, an educationist of long experience and excellent repute, who had charge of the Ontario educational exhibit at the World's Fair, contributes to this issue of the FARMER'S ADVOCATE an article of great interest on the subject of agricultural education. The unsatisfactory results attending the introduction of this subject in the public schools on this continent plainly indicate the need for a clearer comprehension of it on the part of the public, and, if we may be pardoned for saying it, by the educational authorities themselves, if failures are not to be repeated. More science teaching is needed, but to do it by merely pouring into the mind text-book technicalities will prove futile. Nature study in the school directed by teachers properly trained as to method is nearer the mark. We commend a careful study of Mr. Dearness' article, both to agriculturists and educationists.

means of advertisements such substances in Canada. More than once they were tendered the FARMER'S ADVOCATE, but refused, and their use condemned through our columns and by every dairy authority in the Dominion. Canadian butter, like its cheese, being pure, clean and good, does not need to be doctored by so-called preservatives, and is steadily forging to the front, both in quantity, quality, and price, in the British markets.

## Tendency of British Agriculture.

Our regular British correspondent, "Scotland Yet," contributes to this issue a vigorous review of agriculture in the Old Land. Notwithstanding the continued tremendous inflow of foreign food products, 1897 was "a good year" with the farmer, inspiring hope for the future. Hereafter his efforts will tend towards two objects: the turning out of products superior in quality to those imported, and by means of Government regulations, involving, we presume, such restrictions as branding, marking, etc., more or less protective in their nature, secure what he terms "fair play." Since competition from all quarters of the world is not likely to grow less keen, the moral for the Canadian farmer is obvious—produce the best and produce it cheaply. The Government is undertaking to see that efficient transportation facilities are provided and that no unreasonable charges are imposed upon the traffic.

## Suitable for Framing.

The handsome and lifelike colored engraving of the group of Mr. H. D. Smith's famous prize-winning Herford cattle will be appreciated by lovers of good cattle everywhere, and well deserves framing. High-class live stock portraiture of this character is seldom produced, and this one, like several celebrated pictures the FARMER'S ADVOCATE has previously issued, will long adorn the walls of the homes of our stockmen.

new order of things, and which we trust will prove only the advance guard of an influx of high-class bulls, as well as females, of that and other breeds, which will have a good influence in the improvement of our herds and give encouragement to breeders to seek to improve the quality of their cattle, and that the reflex influence of this auspicious movement will be seen and felt in the elevation of the standard of our cattle to the remotest parts of the Dominion.

## Seed Grain for Test from the Central Experimental Farm.

Dr. Wm. Saunders, Director of the Dominion Experimental Farms, writes us that the annual distribution of samples of some of the best varieties of seed grain to farmers, for test in different parts of the Dominion, which has during the past ten years done much to direct attention to the importance of sowing the best sorts of seed in order (together with greater care in selection and improved methods of cultivation) to improvement in the yield and quality of the grain produced, will, under instruction of the Minister of Agriculture, be continued this season. Nearly all the varieties sent out are grown on the Experimental Farms and are selected from among those which, after being submitted to careful and repeated tests, have produced the largest average crops of grain of good quality. As heretofore, one sample of one variety only can be sent to each applicant, and the distribution will be confined to samples of wheat, oats, barley, field peas, Indian corn, and potatoes. All letters addressed to the Central Farm at Ottawa may be sent free of postage, and the samples, weighing three pounds each, will be sent free to the applicants through the mail. Applications may, however, be sent in at any time before the first of March; but after that date the list will be closed so as to ensure the sending out of all the samples in time for early sowing.



The Canady Farmer.

REMARKS BY SLICK JIM, THE REFORMED HAY-FORK MAN.



I hain't no college student, ner deeply lerned in books— I 'spose most folks wou'd rank me with the fakirs and the crooks—

But I've studied human Natur' a'd took a high degree In the school of Ole Experience— Life's University.

An' I ca' kilate I'm posted, if any feller is, On the subject of the Farmer and the entire farmin' biz., An' I jest procee! to menti n that them comic paper chaps Is 'way off in their reck'nin' when they make them funny scraps.

I read 'em in the papers— 'bout ole Hayse d from the farm, Who goes to town a-visitin' an' allus comes to harm; How bunco-steerers tack'les him and 'peers to be quite thick, An' gits his money from him an' fools him with a brick.

An' sometimes they hev picters showin' Hayseed lookin' green, An' wearin' go-fō-meetin' clothes, the wust you ever seen; With big top-boots and duster, an' ole-style carpet bag, Or drivin' through the city with a raw-bone, bobtail nag.



Them funny men an' artists seems to hev jes' one idee— That the Farmer is a bloomin' chump and greenhorn jay, you see; But that is where they're off their base and gives theirselves awa;— I'll back the av'rage farmer 'gin them smarties any day!

You understand I'm speakin' of the farmin' man I know— Which lives right here in Canady— all through Ontario. If the farmer over yender in the States, 'bout which I read, Is the fool they make h m out to be he's quite a different breed.



I reckon I'm no sucker or I'd never got the name— "Slick Jim"—what I was knowed by when I worked the hay-fork 'vame— Or, ruther, tried to work it, a couple of years or so, But had to give it up because the racket wou'dn't go.

If farmers was the idiots them funny writers say, The'd be money in the hay-fork fake, an' I'd be rich to-day; But here I am a-peddlin' tins and livin' straight and fair, 'Cos why? The's eddication an' knowledge in the air!



Wot chance hes fakirs got to thrive on pluckin' rural geese In a country where sound knowledge continners to increase? Where they hev Travellin' Dairies and Farmers' Institoots. They've got no use fer lightnin'-rod or hay-fork scheme galoats.

The Canady farmer mostly takes the FARMER'S ADVOCATE, And gits posted on the markets and about the rates of freight, An' on every new invention an' all the latest frauds, So the fakir's got to git, you see, or work 'gin fearful odds.

An' then, agin, them comic chaps gits up some measly jokes Along another 'line of thought about the farmin' folks— They hev thegall—them city d'es, who never does no work— To picter farmers settin' round, their labor fer to shirk!

Jes' look at this here picter to show you what they do— I clipped it from a paper, and them there verses, too. I'll stop till you hev read it—



"NOTHING MUCH TO DO. "Thar's nuthin' much to do, yer see, Nuthin' much ter do. Th' shingles mostly off th' barn An' let th' rala right through. Thar ain't no use o' stowin' hay Right whar 'will milder every day. 'Twould be good labor throwed away, Thar's nuthin' much ter do. "Thar's nuthin' much to do, by gee! Nuthin' much ter do. Th' fences all down in th' lot, An' let the cows' right through. Thar hain't no use o' sowin' wheat Th' neighbors' cattle fer to eat. I'd sooner sit and rest my feet— Thar's nuthin' much ter do." —Judge.

Now, I make bold to say, The' hain't a farmin' man like that in all of Canady!

If I was huntin' lazy folks, I'd 'speak 'em to be found Where comic paper writers and artists most abound— A lot of long-haired, shiftless coons, with nothin' more to do Than git off thing; like the above, that's neither fair ner true.

The farmin' man's a worker from cradle into grave. Inste'd of bein' a idler, he's nigher to a 'lave; An' I only wish thet things was fixed so, after doin' his best, The farmer wou'd get decent pay and time to take a rest.



God bless ole Agriculture! As every man alive Depends upon the farmer, so, may the farmer thrive! And tho' I've tri'd to "work" him in hay-fork days of yore, I've saw the error of my ways, and won't do so no more! Toronto, Canada. J. W. BENGOUGH.

Poor Man's Farm Power.

SIRS,—I notice in the last number of your valuable paper quite a number giving their experience and opinion of power for the farmer's use. Those powers that have been recommended are all good, no doubt, but they are too expensive for the average farmer. I have a horse-power made on the same principle as the cut in your last issue. I built it in my straw shed, the post running down into the manure shed, the horse working there. I made the wheel 14 feet in diameter; the pulley connected with this wheel is 14 inches, which is run by a small chain, such as a common binding chain, which costs about 5c. per foot. I have about eighty feet; the belt pulley is three feet in diameter, thus giving enough speed for cutting-box. The small pulley cost me 50c. to have it turned out of 3-in. stuff; the large pulley I made with hemlock lumber, three ply; had it cut with a hand saw; cost we 10c. Some of my neighbors use the drive-wheel of an old reaper for this pulley; they say it makes a good one. They have to knock off the lumps. Any handy man can make this horse-power. It will run a cutting-box, pulper, grindstone, and pump water. We get grain ground for 5c. per bag, so it would not pay a small farmer to put in a crusher. I run my cutting-box with one horse, giving plenty of power. I hope this will benefit some of my brother farmers. Grey County, Ont. JACOB LOUGHEED.

The Extension of Live Stock Rearing in Canada.

"Having in view the present numbers and condition of pure-bred as well as general farm stock, the peculiar adaptability of different localities for stock-raising, its vital importance in a successful system of farming, and the market outlook for (1) cattle (beef or dairy), (2) horses, (3) sheep, and (4) swine (or their products), is it desirable at the present time to devote more attention to this industry throughout the Dominion, and to what classes and types of stock?"

A careful study of the live stock industry in the Dominion, from personal observation and otherwise, inevitably leads to the conclusion that the present is a fitting time to institute a vigorous forward movement among farmers and stock-raisers all along the line for extending the sphere of influence of improved stock as the surest source of profit for the rank and file, as well as for the leaders in the great army of producers of farm products. In view of present conditions and future prospects, of the natural adaptability of our country to animal husbandry, and the present and probable tendency of markets for animals and their products, it seems to us safe to say that the rearing of live stock is bound to be more surely than ever the sheet anchor of successful farming and the secret of the expansion of our trade. The hearts of the great majority of Western farmers beat more quickly when the price of wheat approaches the century line, and they are apt to fancy they would be happy if that point were gained, but, as a matter of fact, to nearly all our Eastern compatriots it would mean little, since wheat-raising, as a rule, has been so unprofitable, the conditions being unfavorable; and we are further fully persuaded that even if wheat were to strike and keep the dollar mark it would not eventually mean so much for even Ontario and the West as at first sight appears, from the probability, amounting almost to a certainty, that many men would rush into wheat-growing, an uncertain crop at best, almost exclusively, sowing upon unsuitable soils, ill-prepared and overcropped, with the sure result that reduced yields would soon render their work unprofitable and unsatisfactory, the elements of production being drawn from the soil and sold. It ought to go without saying that failing to feed animals on the farm to supply fertility is folly in its most fatuous form, and will surely end in failure. The cheapest, most potent, and most readily available fertilizer for the average farmer is that made by the feeding of stock on the farm, and if our farms are to feed us, we must feed them. Favored with farming land in large areas naturally fruitful, and which responds generously to generous treatment, failure to furnish fertilizing elements by the most natural and easily available means we prove recreant to our own interests and lower the standard of our profession.

A COMPARISON

of the value of our exports of live stock and live-stock products with those of our grain crops shows at a glance how superlatively important is the former industry even in its present limited and unimproved condition, so vastly short of its best possibilities. Our exports of live stock and live-stock products in 1896 reached the value of \$34,708,183. The value of our exports of wheat flour and bran was \$6,602,239. The value of our exports of grain of all sorts, including oatmeal, in the same year was \$9,353,950, while our exports of all products of the farm outside of live stock, and including hay, fruits, and seeds, was \$13,982,551. These are startling figures, but if the value of products sold for home consumption were added the comparison would doubtless be even more striking. We have no statistics of the value of the live stock on the farms except those given in the report of the Bureau of Industries for Ontario, which give the value in that Province in 1895 as \$103,958,047. Granting that fifty per cent. of the stock in the Dominion is improved and nearly approaching the desired standard, the increase in the value of the other half which could be made by the use of pure-bred male animals in a few years, placing it at the low average of one dollar a head, would mean many millions of added wealth to the country and a proportionate gain to each individual farmer who raises stock to any extent.

ONTARIO AND QUEBEC.

The Provinces of Ontario and Quebec, from their central position, the early introduction of pure-bred stock, and other favorable conditions, have assumed the position of a nursery or breeding ground, from which all the other provinces, as well as the United States, draw supplies of fresh blood for the improvement of their stock. That these Central Provinces are admirably adapted to the successful raising of all the recognized breeds of stock has been amply attested by the great displays at the leading exhibitions and by the record made by our breeders in competition with other countries at the International exhibitions in which



they have taken part. That the leaven of good stock in the center has been gradually spreading throughout the Dominion is evidenced by the improving displays at the Provincial exhibitions in the Maritime Provinces, in Manitoba and British Columbia, but the rate of progress is provokingly slow, and precious time and possible profit is being prodigally wasted by the failure of our farmers to more generally avail themselves of the means at hand to grade up their stock to a standard which will command top prices in the best markets.

Turning our attention to

#### THE MARITIME PROVINCES,

where a fruitful soil obtains, where good pastures prevail, and hay and roots and corn can be produced in abundance, as well as the coarse grains for stock food, it is astounding to learn that the farmers in those provinces fail to raise a sufficient number of beef cattle to supply the needs of their own cities, and that Eastern dealers are shipping regularly carloads of beef cattle from Ontario centers to those cities. There may be some excuse for the people of the seaboard provinces importing their flour from the West, but situated as they are and with the means at hand for raising cattle, the importation of beef surely ranks with the shipping of coals to Newcastle. The existence of such a state of things in a country settled with a sober, industrious and intelligent people is evidence that something is radically wrong, though perhaps an outgrowth of the fall in the price of export beef in recent years. It is true that dairying has taken a considerable hold upon the farmers of those provinces and that they have made commendable progress in that line, but no one will argue that the dairymen have taken possession of the land to such an extent that there is not ample room and scope for hundreds of herds of beef cattle to thrive and prove profitable, while large areas of the provinces are well adapted to sheep husbandry, and, in connection with dairying, hog-raising can profitably be expanded to very much greater proportions, and the standard of quality and consequent value of the product in all lines of stock materially advanced by the use of pure-bred sires of the type suited to the markets.

#### MANITOBA AND THE NORTH WEST.

In the great wheat-growing districts in Manitoba and Assiniboia, especially in these days of high prices for wheat, the temptation is almost irresistible to depend mainly or entirely upon a crop which promises a ready return for a minimum of labor, and which is so easily handled, and the tendency is to despise the cow and the sow which have done so much to help the Eastern farmer over hard places during the depression; but a note of warning to the men of the West may well be heeded, and if acted upon may save many a man from disaster. Rich as is the soil of the Prairie Provinces, it is not inexhaustible, and history warns that wheat is not infallible. A succession of favorable seasons has raised the hopes of the wheat-grower to fever height, but the crop is an uncertain one, and where all is laid upon the altar of the cereal, and a failure comes, a setback is experienced from which it may be hard to recover. In such case, happy is the man who has some good stock to fall back on, and to bridge over the blank which might otherwise engulf him. A few good cattle and other stock can be raised and kept on every farm largely upon rough fodder, which would otherwise be wasted, and the addition of a little coarse grain and roots will carry them over the pinch of the winter months, when the abundant pastures of the prairies will carry them on till they reach the standard of export beef, if bred as they should be and given fair treatment.

The principal demand here is for a *general purpose cow* that can pay her way at the pail, and whose calf, raised on her skim milk, will yield an export carcass at three years old. There can be no question but that the Shorthorn is the breed in popular demand generally throughout these Provinces, and if they are of the milking strain so much the better. The Herefords are in considerable demand for the ranches of Assiniboia and Alberta, where milk is not wanted beyond enough to raise the calf, which follows its dam, and for that purpose they are unquestionably excellent cattle, being good grazers, maturing early and growing fatter on grass than any other breed, having strong, robust constitution, and making first-class rustlers as well as doing good work in grading up common cattle on which they are crossed. A look through the C. P. R. stock yards at Winnipeg, where all the export cattle—from 40,000 to 50,000 this year—from all the provinces are rested and fed, furnishes interesting study, the best cattle, with few exceptions, showing unmistakably the Shorthorn or Hereford characteristics. Polled Angus and Galloway cattle have been introduced in limited numbers and prove hardy, thrifty, and

vigorous, good feeders and rustlers, and good killers, and we see no reason why they should not be peculiarly adapted to the conditions prevailing on the Northwest ranges; but dairying is fast securing a footing in Manitoba and the Territories, where a number of factories and creameries are now in operation, and a general purpose cow will doubtless be the favorite where a market for steer calves is so near and non-breeding or rejected cows can be so cheaply made into beef on the common pasture. In sections adapted for dairying as a specialty, the special purpose dairy breeds—Jerseys, Holsteins, and Ayrshires—have already won loyal champions. The latter enjoys a peculiar place of favor with many, as she *nicks* well with the Shorthorn, producing a fairly good grade beef animal. The prospects for horses have greatly improved, as evidenced by the necessity for fresh importations, and there is room for good sires, both heavy and light; but quality is a *sine qua non*, and whether for work or pleasure, he must have action—be able to cover the ground. Sheep are making fair headway in the West, most of the standard breeds thriving well and giving good returns both in wool and mutton. The hog has come to the Canadian West to stay and pay his way in most approved fashion, climate and feed both agreeing with him. Berkshires and Yorkshires have divided honors pretty evenly. Chester Whites have been pulling up fairly well, and the Tamworth has his long snout in it too. Poland-Chinas, Duroc-Jerseys and Suffolks are not yet numerously represented.

#### IN BRITISH COLUMBIA

the conditions seem to be peculiarly favorable to dairying, the extent of arable land being as yet limited, and the demand and prices for dairy products for the supply of the home market so good; while the facilities for reaching foreign markets are also exceptionally favorable since steamships are sailing regularly from Pacific ports to Australia,

allowed to get reduced in condition nearly to the starving point during one-half of the year, requiring the other half to regain what was lost, and having no good, strong, nutritious food to finish them for the market, they will not stand shipping long distances, but make a sorry show in comparison with well-fed cattle when they meet on common ground in the same market. Our neighbors in the Western States, who are our strongest competitors in this line, have learned the value of what they call "the corn-crib cross" in the preparation of their cattle for the market, which gives them a distinct advantage when their cattle meet ours on the other side of the sea, even when they are no better bred than ours. The best bred cattle will degenerate from generation to generation under a system of starvation till they rank as only well-bred, it may be pure-bred, "scrubs."

#### DAIRY STOCK.

We are free to acknowledge that considerable improvement has been made in the character of our dairy cattle in the last decade, as the result of discussion and agitation by enthusiasts in this department, and the general quality of our dairy stock has attained a higher standard, but there are yet by far too many unprofitable cows which must be weeded out and replaced by better ones before we receive the best returns from our feeding, and we need to pay more attention to breeding with a view to greater capacity for dairy work in our cows. This care should be observed as much in the selection of a bull to breed from as of the cows he is to be mated with, keeping in view the record of his ancestors as performers in practical work, and a judicious system of feeding and treatment during the first years of the life of the cow is of great importance. The dairy cow deserves more attention; she is a money-maker. Hence the well-earned popularity in Canada—now to the front as a cheese and butter making country—of the four great dairy breeds—Ayrshires and Holsteins, Jerseys and Guernseys.

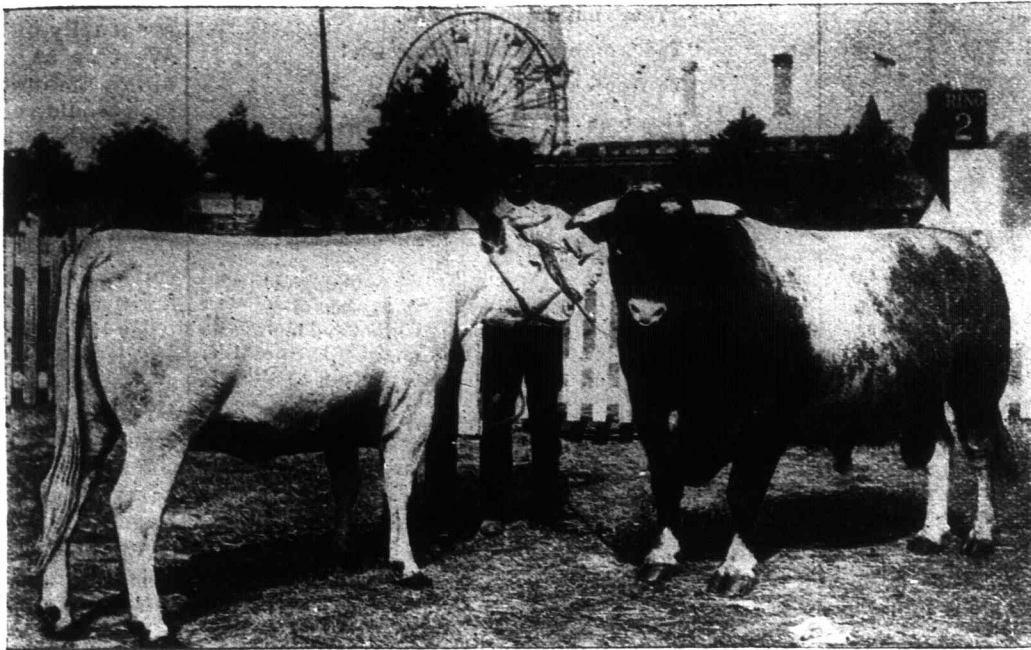
Our observations have thus far been mainly confined to cattle, for the reason that nearly every farmer is a cattle-raiser to some extent, while many do not pretend to raise other classes of stock; but the same general observations apply to the breeding and care of horses, sheep, and swine, as well as poultry, all of which have their place in a system of mixed husbandry, and should play a more important part in the revenue of the farmers of Canada.

#### HORSES, SHEEP, AND SWINE.

The breeding of horses received a rude check by the depression in prices in the past few years, and it was perhaps wise to call a halt in breeding this class of stock so freely; but the crisis seems to have been passed in so far as good, heavy draft and high-class harness and saddle horses are concerned, and now the demand for these at paying prices is such as to justify the breeding in considerable numbers of these classes, always remembering that only the best care and judgment must be exercised in the mating of our breeding stock, keeping always in view the cardinal requirements: constitution, style, action, and a good quality of bone.

The great demand for sheep and the heavy drafts that have been made upon our flocks by American buyers, as well as by the British export trade, has so depleted our supply of breeding stock as to render the situation almost alarming, and the fact that in a country almost every section of which is adapted to successful sheep-raising, it is incomprehensible that the number of sheep in the Dominion is allowed to steadily decrease from year to year. No class of stock on the farm costs so little to secure or to keep, or requires so little care and attention, and none makes a better return for the money invested and the labor bestowed; and yet our supply is millions below the mark of what might profitably be sustained in this country, where sheep thrive as well as in any country on the face of the earth, and the average quality of those we have is far below the standard it might be if more care were given to the breeding and selection of the sires used and to the culling and sale of the inferior females instead of the indiscriminate use of the former and sale of the latter which so largely obtains.

Gratifying progress has been made in swine breeding and raising in the Dominion in the last few years, the standard of quality being rapidly made to harmonize with the requirements of the markets. Enterprising men have invested largely in plant for the curing and packing of pork during all the months of the year, and their principal complaint now is that the supply of hogs is insufficient to keep their plant running regularly. Prices have been very satisfactory the present year, and the prospect is for a steady demand. The dairy business having assumed large proportions in most of the provinces, the by-products of our cheese fac-



MYSIE'S ROSE AND NOMINEE, SWEEPSTAKES PAIR OF SHORTHORNS EXHIBITED BY CAPT. T. E. ROBSON, ILDERTON, ONT. SEE PAGE 557.

Japan, China, and other points. The ranching districts of the Province, being mainly in the interior, are best adapted to beef production, and good beef cattle, we learn, are produced there; but the dairy breeds have secured a firm footing in many sections, and the display of these made at the Provincial Fair at Westminster this year would do credit to any country; and we learn that arrangements are being made to introduce liberal importations of fresh blood during the coming year.

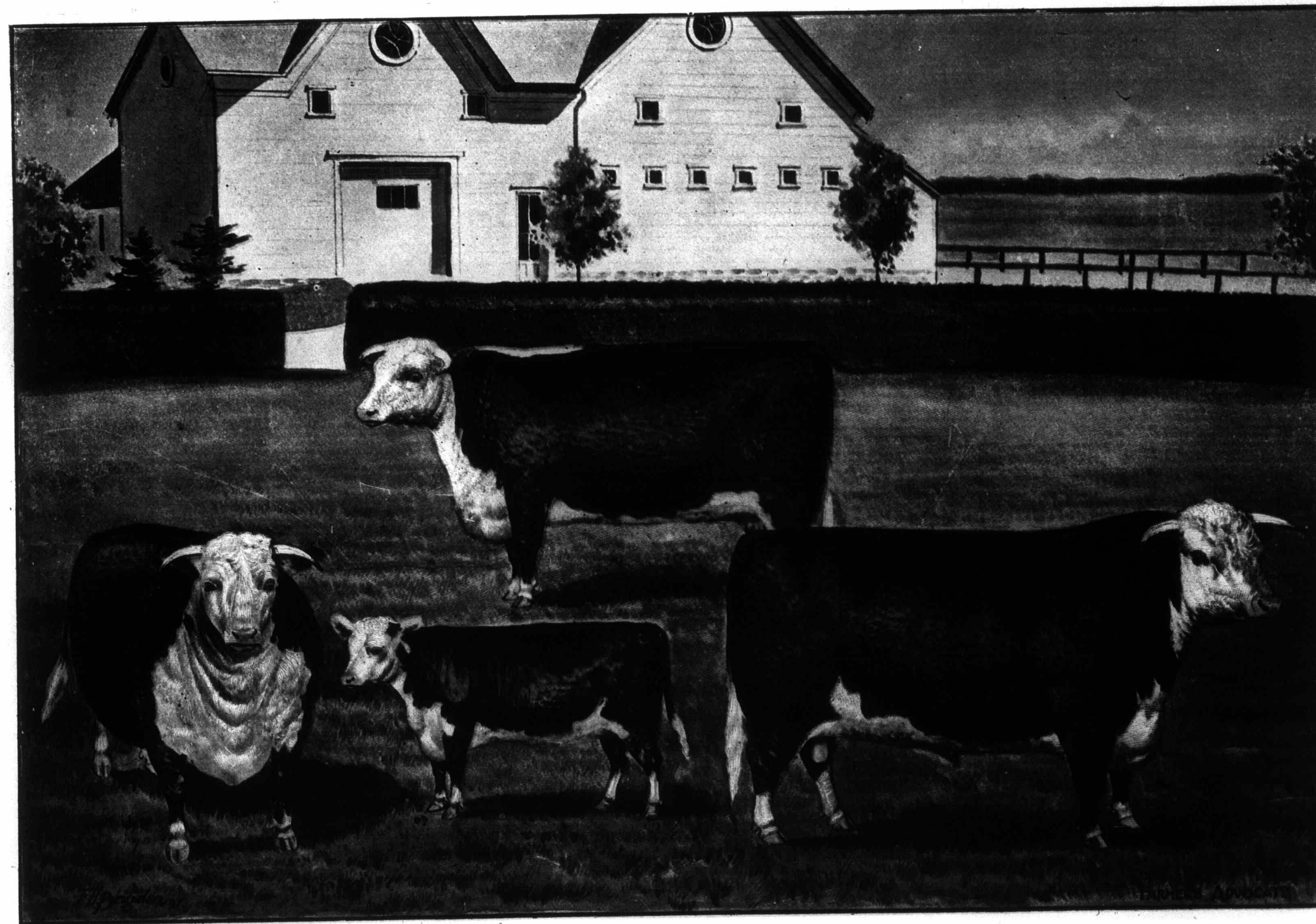
#### BETTER BREEDING AND BETTER FEEDING.

Personal observation on the occasion of a recent visit to the Northwest confirms the complaint that the character of the cattle is not being kept up to the standard required for the export trade. The high-class bulls introduced by enterprising men in the eighties made their mark to a gratifying extent in the improvement of the cattle of that country; but these veteran lords of the harem have had their day, and are dead, while degenerate sons of low-grade mothers, following as sires, have in a few years lowered the standard of the cattle, as this season's shipments prove, and shippers complain bitterly that our cattle, on account of want of quality, have to take a second or third place in the British market, a condition of things which will surely react upon the producer in the form of lower prices and unsatisfactory returns.

The time has come for a prompt and vigorous forward movement on the part of stock-raisers to remedy this evil and to restore our cattle to the position they ought to occupy in the great competition in the markets where we meet the best of other lands, and the first step towards that end must be the introduction of pure-bred bulls of the beef breeds in the bands of cattle which roam the ranges and in the smaller herds on enclosed farms in all the provinces.

The second step in order to success is to follow good breeding with good feeding. No matter how well our cattle are bred, if they are neglected and





SYLVAN 3RD OF INGLESIDE 58495.

SYLVAN 7TH OF INGLESIDE.

JESSIE OF INGLESIDE 63622.

AMOS OF INGLESIDE 58488.

A GROUP OF FAMOUS PRIZE - WINNING HEREFORDS.  
The Property of H. D. SMITH, ESQ., "INGLESIDE FARM," COMPTON, P. Q.



ories and creameries fit in well with hog-raising, and with cheap, coarse grain and millstuff, and with roots and clover readily available, the Canadian farmer is in a position to produce pork and bacon suited to the demand at a minimum of cost, and with judicious management there is money for him in this branch of his business—a branch which will bear almost indefinite expansion, since under present market conditions the limit of the life of the average hog is only about half a year.

If the inditing of this article be instrumental in leading our readers to a more correct comprehension of the great importance to our people, individually and collectively, of our live stock interests, and of the wisdom of applying ourselves to the improvement of our stock and the expansion of our trade in these lines, and if our effort serves in any degree to inspire to resolution and action in this direction, we shall be more than repaid for the time and study expended upon it.

#### Fair "Ingleside"—Home of the Herefords.

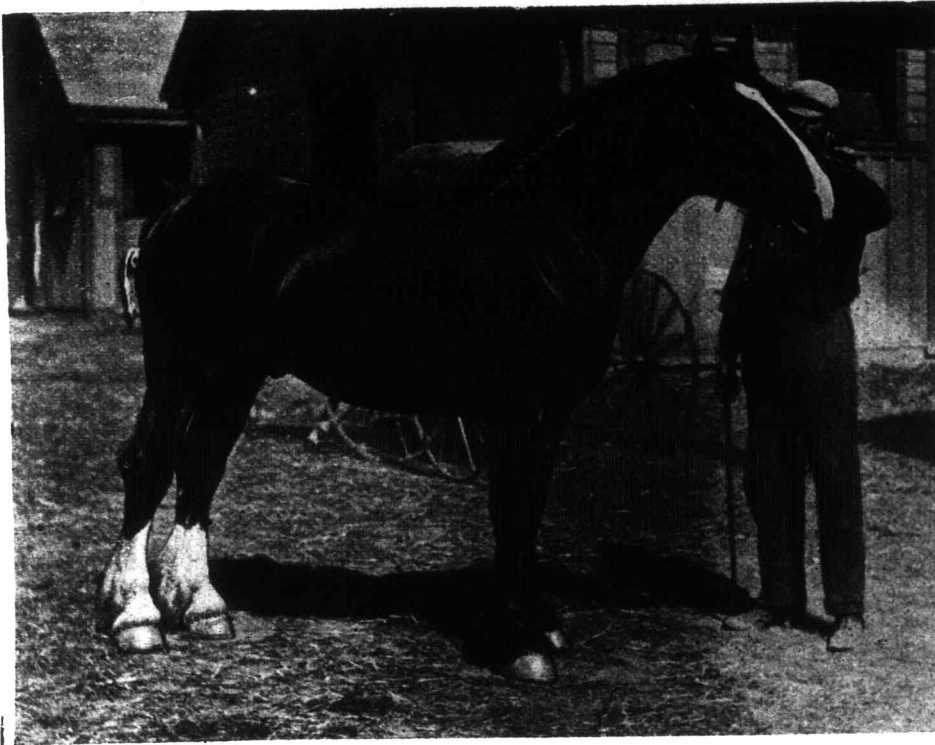
Beautiful for situation, on the outskirts of the pretty rural village of Compton, in the rich and rarely productive district of fine farming land known as the Eastern Townships, in the Province of Quebec, commanding a charming and extensive landscape view which embraces the New Hampshire hills and the distant White Mountains in Vermont, is "Ingleside," the ideal farm homestead of Mr. H. D. Smith, breeder and owner of the champion herd of Hereford cattle in Canada. The farm, consisting of about 950 acres, about 300 of which is arable, the balance in hay and pasture, is a rich clay loam, gently undulating and well drained. The farm buildings are well arranged, commodious and comfortable, consisting of five detached barns, each devoted to a distinct section of the work of the farm, all in line, facing the farm road and sufficiently separated to reduce to a minimum the danger of all being destroyed in case of an outbreak of fire. The handsome and commodious dwelling, large, light and cheery, planned by Mr. and Mrs. Smith for comfort, convenience, and healthfulness, is furnished with all the modern improvements and conveniences of the model city home, and stands on an elevation commanding a view of the whole farm and of the charming scenery in the distance. The water supply for the dwelling and all the farm buildings is by gravitation from springs on the farm, conveyed by pipes to troughs in front of the cattle in the stables, and on tap wherever needed in each separate department. A fifteen-horse-power engine furnishes power for threshing, grinding, cutting straw, sawing wood, and steaming food, and while at such work is further utilized in generating electricity, accumulating and storing it in batteries for lighting the buildings and supplying power for the lighter machinery in the intervals when the engine is not running. By this arrangement a sufficient supply of electricity is generated and stored to furnish the one hundred incandescent lights in the house and farm buildings for three to five days in winter and ten in summer. A complete telephone service connects the various outbuildings with the office of the owner in the dwelling house, an arrangement which does not conduce to the comfort of the host at meal times, when he is supposed to be at home and subject to the ringing up and "hello" process.

The stock on the farm on the occasion of our visit was 140 cattle, 100 sheep, 21 horses, and 60 hogs. The cattle are divided into three sections—breeding, feeding, and dairy—and each department of the farm is handled with a view to profitable production, the whole being under the eye of the owner, who is intensely practical, and has a personal knowledge of the minutest details of the business, and evidently runs it without friction, from the fact that the employees occupying the neat and comfortable cottages on the farm are those who went into them when they were built seven to nine years ago. While every department of the farm receives careful and critical attention, the fine herd of Hereford cattle, now numbering some sixty head, is the special object of the owner's ambition, and of his peculiar care. Mr. Smith is evidently a born cattleman, having that intuitive taste and sentiment which marks a man a master in his profession, and his matured judgment, the result of experience and close observation, has given him the position he holds to-day as leader in the list of Canadian breeders of Herefords. For so young a man, being only in his thirty-first year, and one whose early years were mainly spent at school and in travelling, Mr. Smith's aptitude as a judge and breeder can only be accounted for by his natural love of animals and of rural life, coupled with his application of thought and study to the science and art of breeding. Mr. Smith's ideal of a Hereford is realized in the modern type—an animal of medium size, smoothly turned, clean-cut, and thickly covered with natural flesh, having abundance of fine, silky hair, a rich yellow skin, mellow handling, and, withal, that indescribable quality known to the connoisseur as *character*, which marks an animal as a prince or a princess among its peers. Uniformity of type, and that a profitable one, founded on the bedrock of individual merit by inheritance, has been the aim of the owner of the Ingleside herd, and that success has rewarded his efforts in this direction is amply evidenced by the record of his cattle in competition in the leading showings in the Dominion, and by the fact that for three years in succession the champion male and female of the breed at the three greatest shows in Canada has been found in this herd, and that in the last three years the first

and second herd prizes at these shows have gone to Ingleside.

Standing at the head of the show herd is the doughty champion, Amos of Ingleside 58488, illustrated in group in this issue, now in his four-year-old form, having been born on his way home from the World's Fair at Chicago. He has been a great show bull as well as a successful breeder, having attained a weight of 1,600 pounds before he was two years old, a marvel of early maturity, yet he carries his added weight well on strong, straight legs, and is as smoothly fleshed as a yearling, having straight top and bottom lines, long, level quarters, and full, deep thighs, a broad chest, full brisket, and fine handling quality. To mate with the daughters of Amos and the larger class of cows in the herd to secure and intensify the desired type, a young bull was some eighteen months ago selected from the Weavergrace herd of Mr. Sotham, of Chailicothe, Mo. He is Sir Horace 63688, a two-year-old inbred Horatius bull, by the great show bull and sire Corrector, dam Princess Jenny 22579, by Horatius. He is a lowset, smoothly-turned bull, with a handsome head and slightly drooping horns, a strong muscular neck, a well-fleshed back, full twist, and thick through the flanks, carrying 1,600 pounds on straight legs, and showing no paunchiness, but a compact, well-proportioned carcass, such as a butcher would estimate at a high percentage of high-class meat. This bull is proving a happy nick with the cows in the Ingleside herd, as about a dozen of his calves from two to six months old attest, being broad, deep and thick, and covered with fine coats of hair. He has been a first prize winner in his class through the whole round of the fairs, and has proved all his owner predicted for him.

Prominent among the matrons of the herd is imported Lady Tushingham 3rd, now nine years old, winner of first prize and sweepstakes for several years everywhere shown. She has been fitted for the fairs for eight years in succession, and has been a regular breeder, her last calf having been born in April last, but her wonderful constitution has car-



GOLDFINDER II., CLYDESDALE, OWNED BY JAMES HENDERSON, BELTON, ONT.  
SEE PAGE 557.

ried her through in a state of freshness and smoothness that is remarkable. Her broad, strong back, thickly and evenly covered, the splendid spring and packing of her ribs and crops and levelness of under line make her a model of the breed. Spot 3rd, seven years old, by Anxiety 4th, dam imported Sylvia, a first prize Royal winner, has stood only second to Lady Tushingham 3rd for several years in the round of the fairs, and she is one of the best of the breed, being lowset, deep, and well filled in all her parts, with a sweet face, neat horns, and smooth shoulders. She has made a great record as a breeder, having raised five calves, and she is a good milker as well, having nursed her calf during the circuit of the fairs and kept it in show condition. Own sister to Spot 3rd is Cherry 25th of the same general character, a tribute to the excellence of their noted sire, whose breeding is backed by merit and performance as a producer of prizewinners. Sylvan 3rd and Jessie of Ingleside are the two young cows which appear in the colored plate illustration in this paper, and the calf is the daughter of the former, by Sir Horace. Sylvan 3rd was the first prize three-year-old cow everywhere shown this year, as well as the first prize two-year-old last year, and is a daughter of Spot 3rd, by Pinkham of Ingleside. She speaks for herself in the lifelike likeness, as also does Jessie, a grand daughter of Cassio, champion of the breed in Canada for several years, herself the winner of first-class honors clear round the circuit of the ninety-seven shows, and Daisy of Ingleside, first prize yearling on the same circuit, is molded after the same pattern—smooth, level, and thick. Princess Bonnie, by Kodac of Rockland, richly bred in Anxiety blood is a deep, fleshy 2-year-old heifer, with baby calf at foot.

A notable feature of the herd is the bevy of beautiful heifers, seven in number, imported from England this year, having been selected by Mr. Smith in person from noted herds in the Old Country. Besides these was also imported at the same time the matronly young cow, Miss Gift, now about four years old, winner of second prize at the Royal Show this year, and virtually the first prize cow, since the one placed above her having failed to qualify under the

rules, the first money goes to Miss Gift. She is by Silurian and out of Rubella, and is in calf to Gold Box, by Knight of Leinthal, dam Saucebox 2nd, by Auctioneer, and is one of Mr. Tudge's best family. She is a cow of great substance and fine quality, with a grand back, well-sprung ribs, level lines, and strong breed character, and should prove a valuable acquisition to the herd. Of the seven imported heifers, one is two years past, five are yearlings, and one is a calf, and a smooth, even lot they are, all of similar type, with neat, down-set horns, mossy coats, short legs, deep bodies, and well-covered backs—just such a lot as one might covet for a foundation on which to build a model herd. The two-year-old is Duxmoor Brenda, by Lancelot, dam Brenda, by Bourton, sire of Ancient Briton, champion of the breed at the World's Fair. The yearlings are (1) Lady Bouniful, by Bourton, dam Bryonia, by Viscount Wilton; (2) Lady Rupert, by Rupert, dam Rubella, by Hartington, by The Grove 3rd; (3) Chatterbox, by Rupert, dam Saucebox 4th, by Ancient Briton; (4) Roseleaf, by King Arthur, by Ancient Briton; (5) Ruby, by Rupert, by Ancient Briton, dam Sitire. The heifer calf is Frivolty, by Rupert, by a grandson of Assurance, own brother to Anxiety 4th, dam Downton Finetta, by Lancelot.

Space available would fail us to mention the many excellent home-bred young cows, heifers, and heifer calves which constitute the balance of the female side of the herd, and which are all of strikingly uniform character, while the few robust and shapely bull calves on hand can only be referred to in bulk as promising well for usefulness as sires and show bulls, being of the fleshy sappy, mossy-haired sort that delights the eye of the breeder.

To prove the propety of Hereford bulls in grading up from common cattle, Mr. Smith is preparing some grades for the fat stock show, which will not fail to make a favorable impression on those who see them. A yearling heifer, representing three crosses from a native cow, is a model in conformation of the ideal butchers' beast—long, low, and level, with evenly-covered back, long, straight quarters, well-sprung ribs, and freedom from all indications of excess of offal; she fills the bill to satisfaction. A steer calf, eleven months old, the result of two crosses of Hereford bulls on a Shorthorn grade, is a marvellous example of early maturity, large and full of flesh, and symmetrical in his proportions to a high degree. He will be hard to beat in any company he meets. Taking it all in all, such a herd is seldom seen in any country, and it reflects credit upon the skillful breeder and happy owner, as well as upon Fred. Norton, the faithful herdsman, in whose hands the cattle have had such a successful career.

#### Agricultural Education.

BY JOHN DEARNES, PUBLIC SCHOOL INSPECTOR.

Most people admit that a national system of education perfectly suited to a country will be framed with some regard to the conditions and chief occupations of its people. Some who do not accept this proposition, take the ground that the state exceeds its duty when it undertakes to make education free any further than what is equally suitable and equally necessary to every citizen; others define the measure of such duty as to provide an education that will qualify every capable citizen for the intelligent and free exercise of the franchise, so that the safety of the state may not be imperilled by the ignorance of its people. But so far, those who would limit the course of free instruction to what is of equal value to everybody, like those who would limit it to what is simply necessary for the protection of the commonwealth, have been unable to agree upon the subjects and limits of such education. In the meantime, the majority of those who, while accepting that education is necessary to the state for protection, believe also that the liberal education of the youth is a wise and profitable investment for a state, have been going on making laws, framing courses of instruction, and developing a policy of supporting wholly, or in considerable part, with public funds, institutions of elementary, advanced, and technical learning. Under this policy, too, the temperance people have had physiology and temperance placed on the public school course of studies, and parents who wished their children to become accountants or stenographers, have seen bookkeeping, banking, and stenography placed on the high school course. If the farmers desire it, they have equal reason to demand that agriculture be taught in both public and high schools.

Leaving out the merely instrumental parts of education, such as reading, spelling, penmanship, and the four simple rules of arithmetic, it may be said of the rest that the *method* of learning is of more importance than the *facts* acquired. Knowledge may be stored in the memory by a method popularly called cramming, or it may be acquired by mental processes which exercise the reasoning faculties, strengthen the judgment, and increase the learner's mental capacity. The mental discipline and increase of power gained by a proper method are usually far more valuable than the information lodged by it in the learner's memory. This statement is true of literature, of mathematics, of the physical and especially of the natural sciences.

Agriculture is both a science and an art. With agriculture as an art or trade the general schools



can do very little; on its scientific side, the public and high schools can and should do a great deal. Agriculture is not even a single science: it enters the field of nearly all the sciences as they are usually defined—botany, zoology, including entomology and physiology, chemistry, physics, geology, and meteorology. In view of these facts, it might reasonably be expected that the courses of studies in the schools of a country like Canada, whose most important industry is agriculture, would be well filled with science. Each province has its own school system, and while Manitoba appears to be attempting the most, not any of them, judging by their published regulations, pay all the attention to science which it deserves, for either its disciplinary or its so-called practical value.

The history of the several attempts to give agriculture a place in the public schools of this Province of Ontario has been recounted in these columns. They have all failed so far. One reason is that the teachers, as a rule, are not instructed in science. They did not get much of it in the public schools. It is true that physiology is on the public school course, but that is learned by set lessons from a text-book. Any reader of entrance examination papers will testify that this subject is learned in much the same manner as so much history. In the high schools at the present time a relatively small amount of science is required. For a second-class certificate not a lesson on animal life is required, nor any in botany that cannot be learned from the text-book and dead plants. A good deal of time is devoted to languages—Latin, French, etc. Fougère, an author prescribed for Normal School candidates in 1897, and a most earnest advocate of classical studies, argues that so limited a period as two or three years devoted to Latin, only accomplishing the lodgment of a mass of words and phrases in the memory, results in more harm than benefit. Latin and Greek have unquestionably very high value for culture, but the possession of that value is not made by those who stop with a "junior leaving" certificate. What is the use of learning French or German? Is it to be able to converse in it? If so, much time has been wasted. I never yet heard of anyone acquiring the ability to converse in either of these languages by what he learned for a second-class certificate. But to speak in them is not the reason these languages are studied in schools; their chief value, a high one, too, comes from the study of the masterpieces of literature which they contain. Those who conclude their reading in French and German, with the pages prescribed for the junior leaving examination, pay dearly for the culture they obtain from the study of the "moderns."

"A little learning is a dangerous thing;  
Drink deep, or taste not the  
Pierian spring."

If Pope's couplet contains any truth, it is when applied to the linguistic studies. Those who do not intend to proceed further along an academic course than a second-class teacher's certificate, should not be put upon the labor and misuse of time involved in memorizing foreign vocabularies. A considerable part of it might, with great profit, be given to the sciences that would qualify them to teach agriculture, and the rest of it to the study of our own literature, the richest and noblest of all the moderns.

It cannot be disputed that one reason why the attempts to teach agriculture in the public school have failed, is because the teachers have not themselves learned it. The proper place to instruct them is in the high schools; a revision and improvement of the curriculum would afford the time and opportunity. Another reason why the attempts have failed, is because they have been made by the catechetical or text-book method. This is a useless way to teach any science, and a pernicious way to teach one so complex and progressive as agriculture.

The public schools will truly serve agriculture when they train the pupils to observe, take an interest in, reason about, and form judgments upon phenomena that come within the range of their experience; when the teacher, instead of prescribing lessons from books, will systematically guide children in the direction of seeking the subjects of their observations and reasonings from among those that have a value and interest for the agriculturist, and when the teacher's aim is not to store the children's mind with other people's observations and opinions, to be reproduced on quires

of examination paper, but to develop the mental power and habit which come with knowledge gained by observation and experiment, and by comparison and relation of causes and effects of phenomena that appeal to the attentive senses, no matter in which field of science, so called, these phenomena lie. It is often easy to tell a child a thing which seems at the time difficult to lead him to discover. "As I write these suggestions," says Howe (Systematic Science Teaching, p. 167), "I fully realize the struggle it will cost you (the teacher) to keep silent about all the interesting things there are to be told, but that word 'told' lets out the whole mischief."

A hindrance to the adoption of this kind of teaching will be experienced in communities which have fallen into the habit of judging all school results by the written examination standard. With them, facts are everything—method nothing. Interest, increase of mental power, culture, cannot be tested by examination papers. It would take more skill, time and trouble to lead a child to discover by his own activities the life history of a tent caterpillar than to inform another of equal ability of the contents of 100 pages of a text-book on entomology. The latter could, on an ordinary examination paper, write ten times as much as the former, but when they come to utilize their knowledge the advantages of each kind of training would be exactly reversed.

The value of the education of conception can hardly be overrated. It "increases thought power almost infinitely. Uneducated persons deal with percepts, and their thinking is narrow and child-

ginning with the child. It admits that the public school cannot teach the trade of agriculture any more than it can teach law or engineering, but that it can interest the child in nature and in rural problems, and thereby fasten its sympathies to the country.

This wide-awake University has been doing more than merely preaching and publishing pamphlets on the subject of agricultural education. It maintains a corps of instructors, visiting farmers' meetings and teachers' institutes; it conducts a correspondence instruction department in connection with the farmers' reading circles, and in several other ways has attempted to discover experimentally the best means of teaching the people in agriculture. Director Roberts recently declared that: "We are now convinced that the greatest good which can be rendered to the agricultural communities is to awaken an interest in nature study on the part of teachers and children. . . . We therefore conceive that the real work to be done (by the University) is to instruct the teachers in the methods of imparting this instruction. . . . We believe that this movement directed towards the young of the rural communities is the most important which has developed in agriculture since the consummation of the experiment station idea."

The natural corollary to an educative and practical course of training along this "nature study" line, embracing, as it does, something of the elements of all the sciences, would be the establishment of farmers' night schools or reading circles, where, besides pursuing a regular course of reading and study in agricultural science, free and helpful discussion of the problems and difficulties each is meeting in his daily work would be encouraged.

To summarize: Persons who enter the high schools intending to become public school teachers, should be required to pursue a course of study which, while affording culture and discipline, will be suited to the work that they should do when they become teachers; a course comprising science—plenty of it—including geography and psychology; English, including reading, literature, history, and mathematics, especially the philosophy of arithmetic.

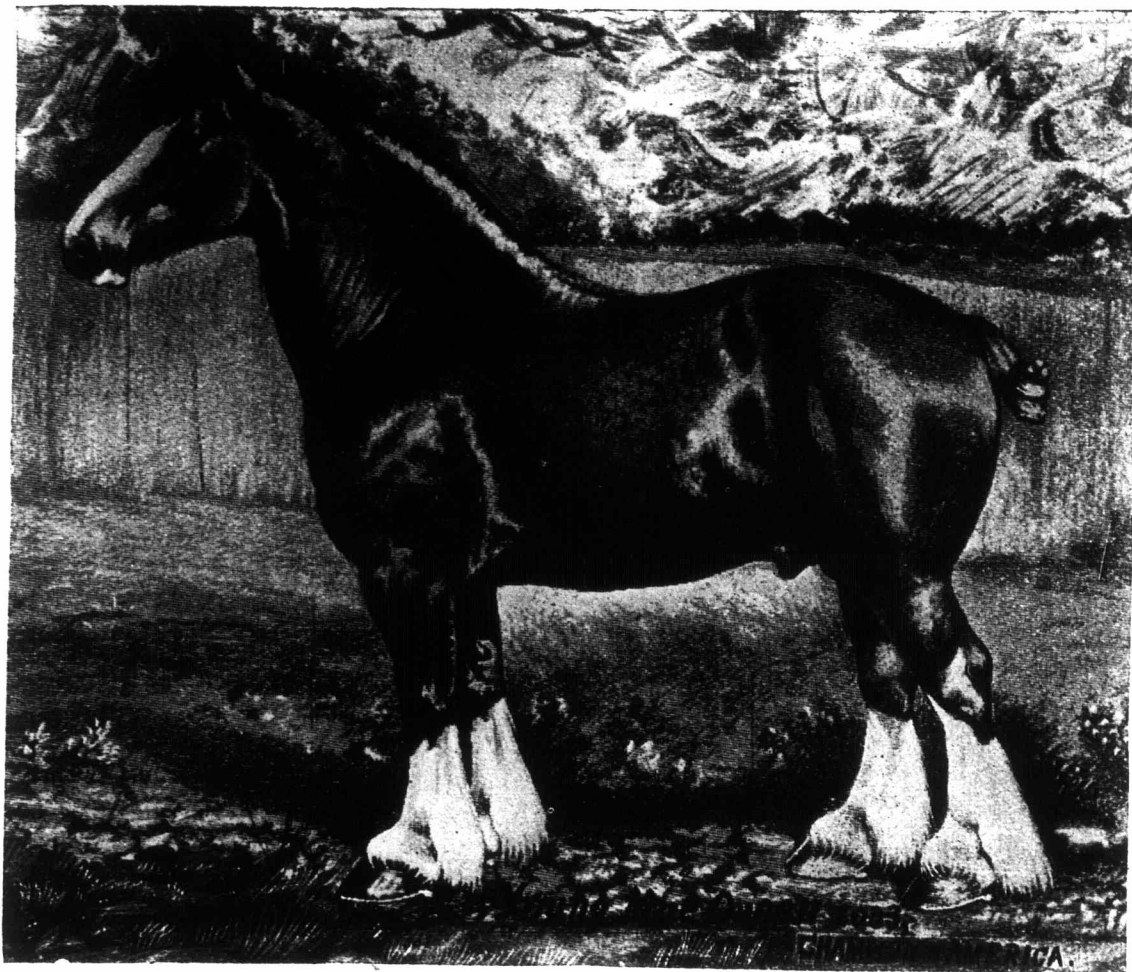
At the Model and Normal Schools their time will be fully enough occupied in learning how to teach properly the elements of the sciences they learned in the high schools. Then, in the public schools it is not a text-book on agriculture that is required, but a well-informed and cultured teacher, who has been trained how to make his pupils observers and reasoners, who is conscious of his opportunity and of his duty to enlarge their interest in and sympathy with all that pertains to life on the farm. Peculiar effects on different crops of the different artificial manures, the mysteries of nitrification, food ratios, and the points of merit of the different rival breeds of stock, the chemical composition of the various crops, the bacteriology of the cheese vat, the life-history of wheat rust, and hundreds of other topics, are not suited to school children, but they will be of use and interest to the post-graduates, to farmers in their reading circles, who as children have been trained to observe and reason by teachers who realize that the method is more than the fact.

#### Central Experimental Farm Stock.

Prior to the serious reduction of the herd of cattle at the Central Experimental Farm recently, owing to a second discovery of tuberculosis there, the buttermaker at that institution was Mr. Joleand-Barral, who has since resigned to return to France. The number of cows was very much less, and it was not deemed necessary to keep so high a priced man as Mr. Barral. In the meantime another man is doing the work in the dairy department. We understand that plans have not yet been matured as to the future stock at the Farm.

#### They Know What They Are Writing About.

GENTLEMEN,—Enclosed please find amount for subscription to FARMER'S ADVOCATE for 1898. I am very much pleased with your journal for the good, practical, common sense it displays in treating farm topics, which evidently are based upon actual experience of the writers. I have shown it to one or two of my American friends, who like its appearance and general get-up, and may become subscribers.  
G. SLADE.  
Newark Co., N. Y., U. S. A., Dec. 3, 1897.



THE SWEEPSTAKES CLYDESDALE STALLION OF AMERICA, YOUNG MACQUEEN, OWNED BY GRAHAM BROS., CLAREMONT, ONT. SEE PAGE 557.



**Cattle Ranching--Its Condition and Prospects.**

BY JOHN R. CRAIG, ALBERTA, N.-W. T.

Cattle ranching in Alberta has passed through the experimental stage, and now rests on a firm basis of prosperity. Established by men who were willing to risk their capital in the venture, it is through their enterprise that Southern Alberta ranks to-day with the most favorable grazing districts on the continent of America. It was contended in some quarters that Alberta was too far north to be economically employed in raising cattle, that the per cent. of loss during winter seasons would prove so great as to discourage the industry. The past sixteen years' experience, however, has proved all such predictions to be entirely groundless, as the average loss of cattle from severe winters and other causes has been much less north of the 49th parallel of latitude than south. While it was known that the Northwest Territory was the home of the buffalo for bygone ages, it was also recognized that they gathered in great numbers to the foothills and adjacent plains, where the Chinook winds prevail, for winter grazing. This area is embraced between Calgary on the north to the boundary line—160 miles—on the south, extending from the foothills of the Rockies eastward to the Little Bow River, 120 miles. This district was set apart by the Government for cattle ranching. Leases for grazing were granted at the nominal rent of one cent per acre per annum, to run twenty-one years.

The first large importations of cattle were made from 1881-84 from Montana ranges, of mixed herds, viz., females of all ages, and all steers, the increase of the herd up to four years old, which gave the rancher an annual return for his investment from the sale of beefs from the time they were placed on the range. The cattle were of high quality.

spring and fall "round-up" for calf branding; then turning the herds loose to range at their own sweet will the year round, with only what food and shelter nature provided. There has been a very material change in this respect. The necessity of protection against the losses through allowing calves to run with their mothers throughout the winter led to weaning at the close of the fall "round-up," and providing the calves with food and shelter for the winter. As a remedy against the loss from cows calving through winter, some attempts have been made to regulate the breeding season by gathering the bulls off the range and herding them together until July; but this measure has not been fully adopted by all districts.

The latest estimate of horses and cattle on the range was made last year by the Ranchers' Association by dividing owners into six classes, as follows:

6	companies, from 5,000 to 10,000.
3	" " " 3,000 to 4,000.
9	owners " 2,000 to 3,000.
8	" " " 1,000 to 2,000.
28	" " " 500 to 1,000.
185	" " " 100 to 500.

The horses make a small percentage in the estimate, and are more than covered by the number of cattle owned by settlers with 100 head and under. This estimation shows approximately 100,000 head of cattle ranging in Alberta between Calgary and the boundary line. The shipments to Great Britain for the present year from Alberta have been 15,000 head. The local demand is estimated at 8,000 head, making a total of 23,000 head disposed of at an average of \$40 per head on the range—\$920,000—a satisfactory return when we consider that the growing stock will more than fill up the drafts from the herds made by sales, and leave the herds increased for the future.

Like other investments yielding large returns,

been taken from the herds on the range. At the spring branding the most forward and promising calves are left for range bulls, in the proportion of one for every ten or twelve heifer calves. This may appear to an Eastern breeder a large proportion of bulls, but experience has proved that it is necessary if the fullest increase in the calf crop on the range is expected. It is obvious that such a system of breeding would in a few years greatly deteriorate the quality of the herds. Instead of improvement, there has been retrogression in some districts to such an extent that they have left no bulls of range breeding for two years, and bought young bulls from Ontario, but the supply falls very short for the necessity of the herds. There are some notable exceptions to this system of breeding by companies and private owners, who, having their leases within natural boundaries, keep their breeding herds under their own management, and have kept a liberal supply of thoroughbred bulls. The necessity of a large supply of thoroughbred bulls of beef-producing qualities for the Alberta range is apparent if the high reputation of the range cattle is to be maintained.

It has been surmised in some quarters that the day of large cattle companies is drawing to a close. That through the increase of the number of owners of smaller herds, and the arrival of the settler, they will be forced out of the business. There is no good foundation for such an opinion. Taking the extent of grazing country into consideration, the number of cattle on the ranges might be increased one hundred per cent. and then not be overstocked. Cattle companies and owners, great and small, are making preparations for preserving reserves for feed for winter. The irrigation ditches will produce all kinds of fodder for winter feeding in unlimited quantities, while there is still left a very large range for cattle to roam. Shelter is also necessary



A "ROUND-UP" ON THE CATTLE RANGES NEAR KAMLOOPS, B. C.

This opinion was expressed by an eminent Short-horn breeder, of England, while on a visit to the Alberta ranches in 1883, in company with a rancher. On looking through a mixed herd of four thousand head, a typical herd, which had just arrived from Montana, after a drive of 250 miles, he remarked: "I am surprised at the high quality of the whole herd. I expected to see Texas blood predominating in Montana cattle." The rancher replied, "They are good cattle, but we will improve them." The visitor emphasized his opinion by saying: "You will be fortunate if you keep them up to their present quality. There are cows and heifers which would make a creditable appearance in the showyards at our county fairs in England. Without a liberal use of high-class bulls that herd will retrograde."

A few ranchers began with a breeding herd only, no purchase of steers, deciding to wait four years for any substantial return for their capital. Some ranchers have commenced with cows and heifers brought from Ontario with satisfactory results. The average prices paid for mixed herds in Montana for the Alberta range in 1881-82 varied from \$18 to \$22 per head, calves not counted. The demand for Canadian ranches sent the Montana prices up to \$32 to \$35 per head, calves counted, the next three following years.

Up to 1886 there was a good home market, at high prices, to supply the Indian beef contracts and the construction of the C. P. R. As the herds increased, the supply exceeded the local demand. In 1887 the first large shipments of range cattle to Great Britain commenced, the English market from that time determining the price of cattle on the range suitable for export, four-year-old steers bringing an average of \$10, and dry fat cows from \$27 to \$35.

The management of the herds consisted of the

cattle ranching is accompanied by corresponding risks. The long-continued severity of some winters has created serious havoc among the herds. The winter of 1886-87 will be a memorable one for its severity, and its consequences the most calamitous ever recorded. Losses in Montana were variously estimated from 25 to 60 per cent., while in Alberta it was estimated between 15 and 20 per cent. April is the most trying month in the year for range cattle. After surviving the storms of winter they are less capable of combating adverse circumstances. In the latter part of April, 1892, after a favorable winter, a severe snow storm of ten days' duration swept the Western ranges from the north to Texas, with most disastrous results to spring calves, as well as the weak ones of the herd. These experiences were somewhat disheartening to large companies, and instrumental in encouraging men of small means to engage in the enterprise and own only such as they can provide food and shelter for through the winter—men who will grow up with the business; men of ability and energy, who, from a small beginning, see their herds increase to whatever they are capable of taking care of.

Another enemy to the rancher has been the depredations of wolves. A bounty of \$5.00 per head has been the means of bringing in 1,800 heads of these insatiable calf destroyers; quite as many more had been killed before any bounty was offered. They are now almost exterminated in some districts. The bounty is increased, so that losses from that cause will, it is hoped, be practically nil in the future.

**THE BULL QUESTION**

is to-day the most important facing the ranching interests. The quality of the cattle cut out of the herd for the shipper decides the success or failure of cattle-raising. The principal supply of bulls has

and is being provided for. Of course, this all means some curtailment of the larger companies. Those ranchmen who fall in with the necessities of the future are those who will continue to succeed. We believe this to mean extraordinary prosperity for the cattle interest, and the greatest good to the greatest number.

[NOTE.—The foregoing narrative is confined to Alberta, but there is another great ranching district in Assiniboia, viz., Medicine Hat, Maple Creek, and Crane Lake. There are practically no sheep south of Calgary in Alberta, and little to be said about horse ranching there.—EDITOR.]

**Good Draft Horses and Long-wooled Sheep.**

To the Editor FARMER'S ADVOCATE:

SIR,—There is a great scarcity of good draft horses in this Province to-day. When prices declined some five or six years ago, farmers almost entirely gave up breeding horses, and now there are practically no big two and three year old colts to be seen anywhere. And this in face of the fact that P. E. I. seems peculiarly adapted to the raising of horses, our horses having a great reputation for their ability to stand the wear and tear of the cities, and can always find a market even in dull times; but now, with a rising market, there is no doubt as to the profit in raising heavy draft horses. You could also urge the keeping of more sheep—long-wooled sheep—in this Province. Wool at twenty cents a pound is a profitable production of the farm, and though not necessary to state the reasons, the long-wooled breeds do best in this Province. Of cattle, both beef and dairy, we have plenty here now, but there is great need of better methods both in feeding and breeding to show the profit there should be in breeding and feeding cattle.

Prince Edward Island,

WM. CLARK.



**British Agriculture.**

DESPITE FREE TRADE, 1897 WAS A GOOD YEAR,  
GIVING HEART FOR THE FUTURE.

(BY "SCOTLAND YET.")

Another year has almost seen its course, and the period for stock-taking has arrived. It may be useful and of some interest to glance backward and likewise forward to estimate the British farmer's gains and losses and his prospects in the immediate future. In an anniversary speech on Free Trade, recently delivered by Lord Rosebery, sympathetic reference was made to the fact that while the fiscal policy of Great Britain had during the past fifty years been an undoubted blessing to the vast majority of the inhabitants of these islands, it had borne adversely upon British agriculture, and would in all likelihood continue so to do. With this experience and these prospects, His Lordship was disposed to find excuses for the proverbial grumbling of the British farmer. At the mercy of an uncertain climate, and finding himself face to face with world-wide competition, the farmer has many causes of discontent and merits general sympathy. This is a very fair account of the situation. While peace lasts, that which contributes so much to the well-being of others is bound to operate adversely to the interests of the owner and occupier of British land. Great Britain cannot afford to abandon her policy of keeping open ports for foodstuffs. Even if every acre of cultivatable land in the British Isles were cultivated, she could not feed her own people, therefore she must ever welcome aid from other nations and her own colonies, and according to the measure of that aid will be the prosperity or adversity of her native agriculture. Any proposal to tax food supplies is regarded by serious thinkers of all parties as chimerical; it simply cannot be done, and the wise in heart and head will not spend time speculating about it. Wherever relief to the strenuousness of the agricultural situation may be sought, it is not and cannot be found in tampering with fiscal laws. This truth is very generally recognized even by English farmers, and it would be hard to find anywhere a Scottish farmer who gave the idea a moment's serious concern. This being so, the minds of agriculturists are being directed to other lines of relief, and these may be summed up under the formulae—

PRODUCE THE BEST AND  
GIVE THE HOME PRODUCER  
FAIR PLAY  
alike in his dealings at  
home and abroad. What  
of space remains to us will  
be occupied by a discussion  
of what is past and to come  
under both heads.

It is an accepted truism amongst farmers on this side that the best produce of every kind is to be obtained in Great Britain. We produce the best beef, the best mutton, the best butter, the best cheese, the best stock, and the best grain and roots the world knows. It is rank heresy in most bucolic gatherings to avow any other sentiment, and yet they who consider well know that while true, these propositions are not the whole truth. There is no beef or mutton equal to the best that is produced in Scotland and England, and there is no butter and cheese equal to the best butter and cheese made in Great Britain; but the facts of the trade in foodstuffs plainly show that there must be a great quantity of second-class produce put forth in this country or there would not be such an overwhelming quantity of foreign produce poured into our markets. What is therefore aimed at by those who like to look below the surface is the general levelling up of merit in British produce so that it may not come into competition with the mass of second-class foreign produce. During the two past years considerable progress has been made in the direction of improving the quality of Scottish Cheddars, and this has been attended with a very large measure of success. It is admitted that there is a distinct advance in quality to be observed in the cheese of this season, and farmers have been getting as high as 64s. per cwt. of 112 lbs. for the produce of their Cheddar dairies. The best prices have been made by those who availed themselves of all the aids that science could furnish, and generally it has been observed that those who always made good cheese continue to lead the van no matter what changes in methods or aids they may adopt. Much of the improvement observable this year has been due to the labors of Mr. R. J. Drummond,

THE CAPABLE CANADIAN

who presides over the Scottish Dairy Institute at Kilmarnock, and in the Stewarty of Kirkcudbright special efforts have been put forth to ascertain the bacteriological causes of phenomena in cheese-making. These have been under the control of Mr. J. R. Campbell, B. Sc., formerly connected with the Glasgow and West of Scotland Technical College, now the head of the Harris Institute at Preston in

Lancashire. Three years ago dairy farming in Scotland was in a state of collapse. Now, so far as cheesemaking is concerned, it is in a satisfactory and improving condition. As for buttermaking, the position is hardly explicable to the foreigner. The best butter in the world is made by the wives and daughters of farmers in the West and South-west of Scotland; the worst butter in Christendom is probably also made in some parts of Scotland. Tons upon tons of factory-made butter is imported into this country every year, and one section of authorities seem to imagine that they will bring this to an end, or at least cripple the trade by making the public believe that this butter is largely made under insanitary conditions. It may be so, but so long as the British public understands by his nose that the butter he eats is sound and wholesome it will be hard to convince him that it is made under conditions inimical to public health. It will not be easy to convince him that good butter can be made with bad water, and the most effective method of driving out the foreign and colonial butter is to place better butter in the market. Whenever an outbreak of enteric fever can be traced to foreign or colonial butter the fate of that particular brand of butter in the British market is sealed. The foreigner and the colonial had therefore better look after his drains. Until that day arrives the way to drive out the foreigner is to beat him in quality. Similar remarks apply to other articles of agricultural produce. Foreign beef and mutton is certainly not as a rule equal in quality to the best British. The effective method of overcoming or at least getting the upper hand of foreign competition is to produce better beef and mutton at home.

In this department there has been much anxiety during the past year on account of what is known as the Butchers' Boycott. There is some reason to fear that the aim of this movement, to which reference was made at some length during the year, is

pains and collected evidence from all quarters. The witnesses made it quite plain that an extensive and deliberately-planned scheme of misrepresentation is in vogue in London and other large towns whereby foreign meat is sold as home, and foreign compounds are sold as genuine dairy produce. The bill so adversely criticised by Dr. Gillespie was supposed to be based on the report of this committee, which was certainly very drastic, but it only made a fool of the report and ignored two-thirds of its recommendations. The British farmer wants fair play first in this, that his competitors in the butter and cheese line be compelled to manufacture their produce under the same stringent sanitary regulations as are imposed upon him; second, in that his foreign competitors who send in dead beef and mutton have their goods subject to the same rigid inspection as his are when he sends in a carcass to the dead meat market of one of the large cities; and, third, that no one be permitted to send in margarine or other fatty substance colored so as to look like butter, or butter mixed with margarine, in however small a degree. These reforms are demanded on the broad ground of public morality, and also on the ground of giving fair play to the home producer. He is willing to fight all rivals in an open market, but he is not prepared to fight with

ONE HAND TIED BEHIND HIS BACK.

Even if he produces first-class quality all round, he will be handicapped if the present one-sided conditions remain. With these removed, and a general advance in quality all round, the British farmer can face all his competitors and give a good account of himself in the fray.

Much more might be said in a discursive way of the lessons of the past and the prospects for the future, but our limits are exceeded and we call a halt. To sum up, 1897 has been a good year for the British farmer as seasons now go, and he has some heart to go forward.



THE RESIDENCE OF KENNETH M'KENZIE, EX M. P. P. BURNSIDE, MAN.

not its ostensible aim—the crushing out of co-operative stores—but the annihilation of the trade in home beef, so that it may not come into comparison with foreign to the detriment of the latter. A further stage has been reached in this conflict by the attempt to exact a pledge from farmers, that they will not buy from or sell to anyone, be he butcher, salesman or farmer, who is not pledged to support the butchers' boycott; or, as it is put, "is not a signed member of the Flesher's Trade Protection Association." It is the more difficult to believe in the *bona fides* of the butchers, seeing that they have suffered very little at the hands of the co-operative stores, while their movement has driven many of these to take up the business of selling butcher meat. The net result of their efforts so far has been to advertise the stores, which are now doing a big butcher business. A more inordinately selfish movement than that of the butchers has not been known in the history of British trade; but if the farmers only stand firm and refuse to sign the pledge, they can "burst" the boycott and many if not all of the salesmen will be only too glad of the excuse to withdraw from a position which reflects little credit on anyone.

Naturally we are led from this to look at the demand of the British farmer for fair play in competing with his many rivals. This subject was exhaustively discussed by the Rev. Dr. Gillespie, the well-known authority on Scottish agriculture, and especially Galloway cattle, at a farmers' meeting in Paisley on November 11th. The reverend gentleman was very outspoken in many of his arguments, and was particularly severe on the Government for having introduced a most inadequate Food and Drugs Bill at the close of last parliamentary session. The whole question of the adulteration of food and fraudulent misrepresentation regarding meat and dairy produce was fully investigated by a select committee of the House of Lords, who had great

test, group I. weighed 4,255 pounds, group II. 4,250 pounds, and group III. 4,260 pounds, the heaviest group exceeding the lightest by only ten pounds.

During the first six weeks group I. was fed an average per head per day ensilage (Robertson's mixture) made from corn, horse beans and sunflowers, 50 pounds, turnips 25 pounds, and hay 5 pounds, at a cost of 10½ cents. During this time the steers made a daily average gain of 1.13 pounds, at a cost of 6.74 cents per pound. During the next eight weeks each animal in group I. received two pounds of mixed meal per day in addition to the above bulky ration. During this period the daily average gain was 1.31 pounds, at a cost of 7.16 cents per pound. During the remaining six weeks 4 pounds of meal were fed to each animal, the bulky fodder remaining the same. The gain during this time was an average per day per head of 2.04 pounds, at a cost of 5.58 cents.

Group II. was fed throughout the twenty weeks on a coarse ration of corn fodder, 25 pounds, turnips 25 pounds, and hay 5 pounds per head per day. During the first six weeks they were each fed daily 4 pounds of mixed grain, during the following eight weeks 6 pounds, which was also continued throughout the remaining six weeks. The daily average gain for the first six weeks was 1.24 pounds, costing 9.51 cents; for the following eight weeks, 1.17 pounds, at a cost of 10.38 cents, and during the last six weeks 1.21 pounds per head per day, at a cost of 9.88 cents.

Group III. was fed a daily coarse ration of hay, 20 pounds, turnips 50 pounds, and during the first six weeks 4 pounds of meal, and for the following fourteen weeks 6 pounds of meal. The daily average gain for the first six weeks was 1.30 pounds, costing 9.82 cents per lb.; for the following eight weeks 1.15 pounds, costing 9.67 cents per lb.; and during the last six weeks the steers gained 1.35 pounds per day, at a cost of 10.02 cents per lb. During the course of these tests the steers had

#### Cost of Steer Fattening at Central Experimental Farm.

In order to ascertain the relative cost of fattening steers on different rations, an experiment was conducted at the Ottawa Experimental Station during the winter of 1895-6 with twelve grade Shorthorn steers, and is reported in the annual report for 1896. They were purchased November 1st, 1895, in thin condition, ranging in weight from 975 to 1,145 pounds, and consisted of two-year-olds and three-year-olds. From Nov. 1st till Dec. 17th they were fed alike on corn ensilage 50 pounds, roots 25, and hay 5 pounds, without any grain. At the latter date they were divided into three groups of four each and fed differently for a period of twenty weeks. At the beginning of the



access to water in a trough in front of their stalls; they were also supplied with salt in a small box at the side of the manger. They were weighed once each week, and the feed they consumed was weighed each day.

From these tests it appears that the four steers fed on ration I. gained in all during the feeding period 831 pounds, at a cost of \$6.49 per 100 pounds. The steers fed on ration II. gained in all 685 pounds, at a cost of \$9.42 per 100 pounds; while the four steers fed on ration III. made a total gain of 693 pounds, at a cost of \$9.83 per 100 pounds. These results show that the withholding of grain during the early stages of fattening is economical, and also that it is advantageous to use silage made up of corn, sunflowers and horse beans over the other rations of corn fodder or hay.

**The British Columbia Outlook for 1898.**

BY R. M. PALMER, B. C. DEPARTMENT OF AGRICULTURE.

It may be stated without fear of exaggeration that the universal interest now centered in British Columbia and the adjacent Yukon country has no parallel in the history of Canada. A somewhat similar occurrence took place in 1857, when the excitement caused by the gold discoveries in the Cariboo country caused a rush of miners and others into the Province, and first brought it into prominence. There is now no shadow of a doubt that British Columbia is on the eve of enormous developments in all branches of industry, and her merchants have business in prospect to handle which will tax their utmost endeavors.

Mining, especially for gold, is the prime factor, and will necessarily draw the attention of the great majority. The fortunes realized in a few months by a number of hardy miners in the Yukon district has focussed the attention of a host of adventurous spirits of all classes in many countries, and with the opening of spring there will be an unprecedented rush to share the unquestioned treasures of nature's store-houses in that ice-bound region. The outfitting of the parties who will attempt to penetrate the wilds of the Yukon country will furnish an immense business to those catering to this trade, and supplies of all kinds, but chiefly concentrated articles of food, will be required to the tune of millions of dollars. The rush for Dawson City last fall by comparatively a few people caused an increase of business in the Province, especially at Victoria, which fairly opened the eyes of merchants in all our towns, and prepared them for the immense trade the coming year. As a consequence large stocks of miners' supplies have been already laid in or are in transit, and arrangements perfected to replenish these as required. There is no abatement of interest in the quartz mining operations of the Province. Certainly the flotation of mining companies has slackened, and there is not the same eagerness manifested to support any and all mining schemes and companies with exaggerated prospectuses which was so pronounced a few months since, but a great many properties in the Kootenays are now developed sufficiently to fairly demonstrate their capabilities, which a year ago were only prospects, and capitalists or their representatives from Eastern Canada, Great Britain, and other countries are taking hold of the most promising of these for development into shipping mines. Then there has been a marked increase in the output of the shipping mines of the Kootenays, and the production for the year will be very large considering the short time which has elapsed since the output really amounted to much. According to an article written by Mr. W. A. Carlyle, Provincial Mineralogist: "In lode mining the beginning dates to about ten years ago, but in reality only to about five years, and the rapid progress during the past few years is most significant. In 1837 the output was \$17,331; in 1896, \$4,257,179; and in 1897 (estimated), \$7,500,000. The above are only the returns from West Kootenay alone, and the total output of all the mines, coal, placer, etc., will easily reach \$10,000,000, a most gratifying increase since 1890, when it was but \$2,608,608. These figures are indicative of steady yet rapid increase in the production of the mines, which altogether have produced \$110,000,000, and of the fact that British Columbia is now fast taking her place among the great mining countries of the world."

Nor are the quartz mining developments limited to the Kootenays. The Lower Mainland, Vancouver, Texada, and other islands are being thoroughly prospected for mineral deposits. Many promising claims have been located, and some sufficiently proven to give every prospect of turning out valuable shipping mines. The opening up of the country by means of railroads and waggon roads is proceeding apace. New districts are made accessible, and the area of mineral deposits which can be profitably worked largely increased.

Agriculture.—The effect of all these mining enterprises upon the agricultural interests of the Province must be very marked. In most cases it ensures high prices to the farmer and fruit-grower,

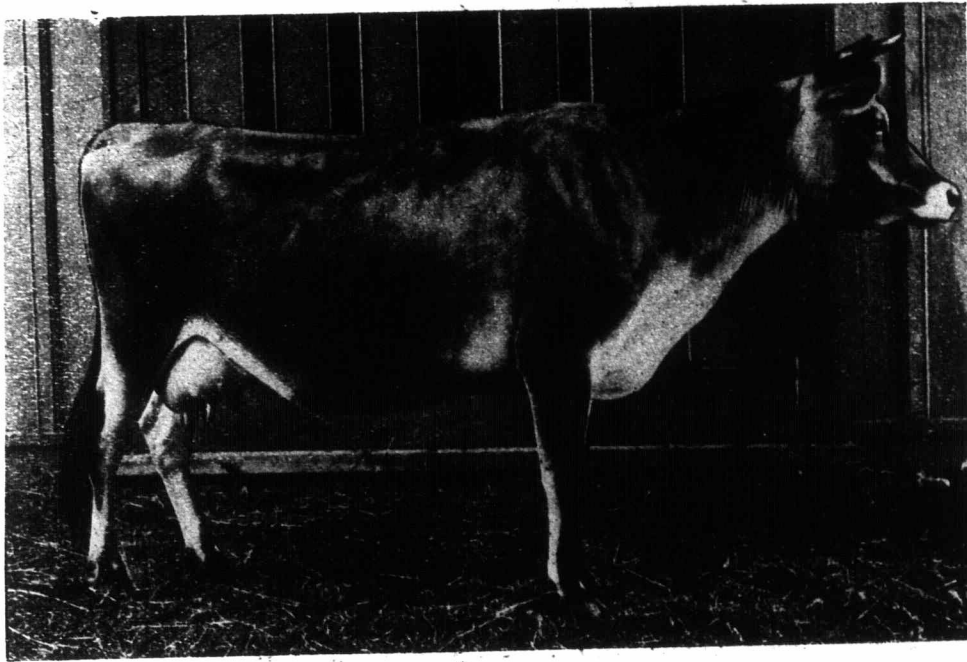
and very often a market for all that can be produced, close to hand, where previously no market existed, or the payment of heavy freight rates was required to reach one. The transportation facilities brought about by mining operations have also opened up many areas of land, large and small, which may be adapted for agricultural and horticultural purposes and the establishment of many happy homes, often amidst scenery the most varied and attractive. The proximity of mining towns of retent growth to some of the older settled portions of Southern British Columbia will have the effect of completely changing the nature of the agricultural operations. In place of large ranches previously devoted to raising cattle and horses, by the subdivision of the land into small holdings, intensified farming will be encouraged, and the growing of vegetables and fruits become leading features. Dairying, too, where conditions are favorable, will be carried on, with a certainty of remunerative prices for milk and fresh butter. In spite of the distance and heavy freight charges involved, the farmers of the Lower Fraser Valley have reaped considerable benefit from the new markets in the Kootenays, not only by obtaining higher prices for produce, but largely on account of the opening of fresh markets, and greater competition for the handling of their crops. There is also room for congratulation on account of the increased attention paid to more economical methods of farming, largely brought about by the necessities of the situation consequent on the "hard times" (now happily past) and the comparatively low prices obtainable for farm produce. There has also been going on a gradual "weeding out" of those engaged in ranching (as it is usually termed), sometimes on account of too heavy burdens upon their lands, but very often on account of the unsuitability of the man himself for his chosen pursuit. The result has been the survival of the fittest,

demand for the manufactured article at the various mining, lumbering, and fishing camps throughout the Province, and at present the entire consumption is of the imported article, amounting to many thousand dollars in value every season.

Considering the enormous quantity required of hams, bacon, and other pork products, it seems strange that more pork-packing is not done in the Province. At present the supply of hogs is perhaps too large for the fresh meat trade, but not large enough to supply a large packing establishment, but as hogs can be raised cheaply, and there is a notable freedom from swine diseases, no doubt efforts will be made looking towards the promotion of this industry.

Hop-growing, which had been (in concert with the same industry elsewhere) for some time past in a somewhat languishing condition, owing to the low prices prevailing, has received a decided stimulus this season, remunerative returns being the rule. The choicest English varieties of hops can be grown, and indeed reach perfection, on Vancouver Island and some portions of the mainland. The future of this branch of agriculture lies in growing such varieties only for British markets, where the highest prices have been obtained for choice cured British Columbia hops for the past three years. On the other hand, several hop-yards which were set out a few years ago with the Puyallup variety have proved unprofitable, and some have gone to ruin. The boom period of this special crop has passed, with the result that experienced men are well satisfied with the present and prospective profits.

Fruit-growing is rapidly coming to the front as one of the most promising occupations of the Province. The success which attended the exhibits of fruits, chiefly apples and pears, at the Spokane fruit fairs of 1896 and 1897, when in spite of the keenest competition from Oregon, Washington and Idaho States, many first prizes were taken in leading varieties, owing to the superior quality and "finish" of the B. C. fruit, has demonstrated beyond cavil the advantages of the soil and climate of the Province for the production of first-class fruit. At this season's fall exhibitions at New Westminster, Salt Spring Island, Vernon, Kelowna, Cowichan, Nanaimo, Mission City, Chilliwack, Kamloops and elsewhere splendid displays of pears and apples were made. The reputation of the Province for producing wonderful crops of the finest small fruits, plums and cherries has had no opportunity of late years of demonstration, so far as exhibition is concerned, but it is the desire of the writer and prominent fruit-growers of the Province to bring evidences of its capabilities in that line before Eastern Provinces next season. Owing largely to the wise action of the Provincial Government in generously supporting the Provincial Fruit Growers' Association, which took up the questions of "Varieties to Plant," "Methods of Work Amongst Fruit Trees," etc., and later on the formation of a Provincial Board of Horticulture, whose duty it became to devise and put into effect measures for checking the damage done by insect pests and fungous diseases of fruits and fruit trees, the horticultural interests of the Province have been put upon a secure basis. Another vital question being successfully grappled with by means of a Provincial organization is the profitable disposal of fruit, both in home and distant markets. The local shipping unions at first formed amalgamated and created the British Columbia Fruit Exchange, the necessity for this action being apparent after two local shipping associations came into disastrous competition with one another in the Northwest Territories. All the fruit, practically speaking, of home growth handled for export the past season went through the hands of the executive officers of the central organization, with, on the whole, satisfactory results. And when the fact is borne in mind that the shipments of green plums and prunes from the neighboring States of Oregon and Washington resulted in failure, often not realizing sufficient to meet freight and packing charges, and that B. C. growers received an average net price of \$35 to \$40 per ton for similar classes of fruit, there is good reason for satisfaction with what has been accomplished. Business connections have been established, and a reputation for just dealing built up which augurs well for next season's operations. The fruit crop of the past year was without doubt the largest yet harvested, and many trees were allowed to fruit beyond their ability to ripen their burden and make provision for a full crop next season. Still, wherever common sense was used in this respect there is to be found a fair number of well-ripened fruit buds, and the prospects for next season's fruit crop may be stated as very good at present. Young orchards are coming into bearing very fast, and there will probably be fully as much fruit harvested as this year, with the probability of a very much increased demand both at home and for export.



THE SWEEPSTAKE JERSEY COW, MANOR LASS 2ND—6015—, J. H. B., OWNED BY R. J. FLEMING, EX-MAYOR OF TORONTO, ONT. SEE PAGE 557.

involving very often the passing of land into the hands of those better fitted to compete. Again, in the Lower Fraser Valley extensive dyking and draining works have been recently brought to a successful conclusion, and large areas of some of the most fertile lands of the Province rendered safe from floods and high tides, with the result that the acreage under cultivation is increasing very fast, and as "nothing succeeds like success," other schemes of similar nature are on foot. These changes are taking place notably in the Delta, Matqui, and Pitt Meadow districts. To a certain extent increased production is going hand in hand with increased consumption.

In the fertile Chilliwack Valley, great hopes are being built upon the construction of a line of railway from the coast to the Kootenays, which would put that splendid farming district in direct connection and comparatively close touch with the mining centers, and as the coast cities are also extremely anxious to attain direct connection with the Kootenay towns, great pressure is being brought to bear towards the accomplishment of the project.

Dairying has benefited very much by the operation of creamery plants at Ladner's Landing, Chilliwack, Duncan's, Vancouver, Salt Spring Island, and New Westminster, and the prospects are promising. From lack of a full supply of milk, the cost of buttermaking has been higher than necessary at some points referred to, but experience is teaching the farmers of the districts tributary to the factories that their best interests are bound up with those of the creameries, and a more general support will be given to them the coming season. At present the home market for No. 1 fresh butter is supplied by the creameries, in spite of the fact that considerably higher prices are asked than those for which choice imported butter is held. The desirability of starting condensed milk factories is being canvassed, and will probably take shape during the coming year. There is no question as to the



**Flax.**—Considerable interest is being taken in flax-growing for fiber. Samples produced this season were pronounced by expert judges to be very fine, and the question will be treated on a larger scale next season, with the view of determining if there is a place for this industry.

Tobacco-growing in the Okanagan Valley is being thoroughly tried by experienced men, who have invested largely for the purpose, and have the greatest confidence in their ability to produce a fine quality of tobacco for cigar-making, and as they will soon have a quantity of the cured article for sale the matter is in a fair way to be determined, with the chances all in its favor.

Summing up the situation from the farmer's point of view, everything indicates prosperity in the future, and it is difficult to conceive a more roseate state of affairs so far as he is concerned. All staple crops are in demand at high prices, with the certainty of going still higher in value as the army of consumers heading for the Province materialize. The best gold mining will continue to be done in British Columbia's fertile soil, without any of the hardships inseparable from the true miner's occupation. He may, perhaps, have to pay more for labor than during the past year or two, but this will probably last but a short time, as amongst the thousands who will make their way to the gold fields there will be many who will return to civilization within a short time and turn their attention to more congenial pursuits, repeating the experience of hundreds of others in the early days of the development of the Province.

#### A Visit to the Ontario Agricultural College.

The annual meeting of the Ontario Agricultural and Experimental Union, on Dec. 9th and 10th, was the occasion of a hurried visit to the College farm at Guelph. This notable annual gathering seems to grow in numbers and interest year by year, as the number of ex-students are annually increasing. While one of the class-rooms not long since accommodated the most largely attended sessions, it is now necessary to use one of the largest rooms of the institution—the larger half of the second flat of the new experimental building.

Year by year we see great advances at the College. The students' roll is the largest this year it has ever been—about 150 students mostly from Ontario farms—and all are reported to be working faithfully. We saw the practical working of the new home-generated water pressure for fire protection. The students' brigade gave an exhibition of their drill, which clearly illustrated its great efficiency in service, as a very strong stream was easily thrown over the highest portions of the main building. The source of water supply is a well put down in 1896, and forced by a modern pump.

A walk through the stables showed us that the stock is all in thrifty, vigorous condition. The sheep, which a few years ago were supposed to be in a diseased condition, are looking the picture of health. On speaking to Mr. Rennie concerning them, we learned that they were turned away to a grass lot each fair day for a few hours. In the morning and evening they are given cut clover hay, turnips and corn ensilage, mixed several hours previous to feeding. At noon they get pea straw, and no grain at any time until after the ewes lamb. Mr. Rennie considers it important to have the pens cleaned out frequently.

We were pleased to find under conduct an experiment in feeding cattle which the FARMER'S ADVOCATE suggested for the experimental stations—that of making a comparative test between feeding steers tied up, and running loose in box stalls. On Nov. 1st, 21 head of Shorthorn grade steers were brought to the farm; 15 head, averaging 1,222 pounds, were tied up, and 6 head, averaging 1,219 pounds, were turned loose. They are all fed alike twice daily, on a ration consisting of 24 pounds of mixed feed, made up of ensilage, cut hay, chaff, pulped roots, and cut corn fodder, and at noon they are given a forkful of green rape, which was put into windrows in the fall. During the first month they each received one and three-quarter pounds of mixed meal twice daily, consisting of bran, oats and barley chop in equal proportions. At the end of November the loose steers showed a decided gain over those tied up. During this month they are getting the same food, except a larger quantity of grain—about three pounds twice daily. They all have fresh water constantly before them. The green rape will last till about New Year's, when turnips will be fed at noon. Mr. Rennie places great stress on feeding a succulent ration. They will be weighed monthly until fat, which will decide for Mr. Rennie which method of housing will be practiced in coming winters. We will look forward to the results with interest.

The idle farm teams are being again wintered on a mixture similar to that fed the cattle, except that carrots are fed instead of turnips. Their food costs about seven cents per day. They are perhaps a little thinner than many horsemen desire to see, but they appear healthy and their coats glossy. Some steer and pig feeding experiments are just commencing at the dairy barns, under Prof. Day's oversight, which were not sufficiently advanced to enable us to draw any conclusions.

We were pained to learn that J. H. Pantou, M.A., the efficient and popular professor of biology, has not recovered from his illness, reported in our columns some time ago, and now lies in a very precarious condition.

#### Agricultural Instruction in Nova Scotia.

The Provincial School of Agriculture at Truro, N. S., is the center of an extensive system of instruction in that Province. Its pupils consist of an average of about fifty regular students, besides a score or more of special dairy students and the teachers attending the Normal School. The work of the Normal students will be of peculiar value in building up a healthy agricultural sentiment in the children they educate. The school is undoubtedly doing good work, but the attendance is certainly not what it should be, although the numbers remain fairly constant from year to year. It would seem that the number of students could with advantage to the Maritime Provinces be considerably increased—perhaps through the agency of the agricultural societies, the press, and otherwise—thus broadening and increasing its influence for good. Besides this Provincial School there has for two years been in operation a number of local agricultural schools, in which many students receive instruction. These should act as feeders to the Truro institution. The nominal session of the school has been from November till June, inclusive. The demand, however, from summer students has necessitated keeping the school open through the summer season, when the attendance has exceeded that of the winter session, and in the future the summer session will be made, along with the spring and fall, one of the most important of the year.

State College of Agriculture, had charge of the work, which now falls to his successor, Prof. F. C. Sears, M. Sc., a graduate of Kansas Agricultural College. Mr. Sears also took a special course of study in botany and horticulture at Cornell University. Until a recent date, for a short time he occupied the position of Professor of Horticulture and Botany at the Utah Agricultural College. The school is open from November 1st to May 1st, and has a course of study suitable to young farmers or those interested in fruit culture. Its Government is under the control of the Executive of the Fruit Growers' Association, who have, by taking an active part in its working, done much to make it a success. Its present equipment is good. The influence of this school is not confined to Nova Scotia, as the Legislature of New Brunswick grants it a liberal bonus per student from that Province, while Prince Edward Island has assured similar support. A number of students from these provinces are annually in attendance, besides from fifty to sixty Nova Scotians taking advantage of the course, which is of a very practical nature, embracing seeding, cutting, planting, grafting, budding, cultivation, spraying, besides harvesting, packing, marketing, and storing of fruit, etc. A yearly lecture tour is also a part of the work of the director of this institution. This should be of great value, as in much of the Province the conservatism of the people has tended to prevent modern practices, which are of so much importance in this age of keen competition.

#### Supplies of Good Breeding Stock Cannot be Overdone.

BY ROBT. MILLER, ONTARIO CO., ONT.

I have noticed the ordinary farm stock in Ontario as well as the pure-bred stock, and one has deteriorated as has the other during the past few years. One exception I might name is the dairy cattle. A great effort has been made to increase and improve dairying in Canada during the past twelve years or so, and it has had the effect of changing some farmers that were fairly successful producers of beef cattle to unsuccessful dairymen. The greatest moneymakers in the different classes

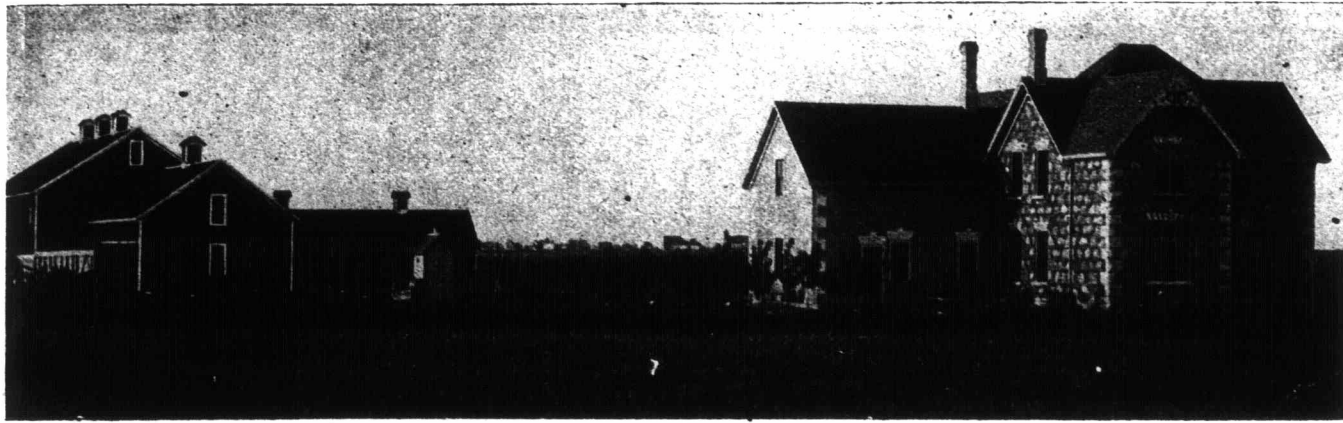
of live stock are: Draft horses, beef breeds of cattle, mutton sheep, and Berkshire swine. Let every man choose first to suit his tastes, next to suit his farm. So much the better if he has considered his taste in live stock when selecting his farm. Buy good animals of the chosen breed, feed liberally (this means never let animals be hungry, but not overfeeding; plenty of healthful and in most

cases bulky food), and attend carefully. A little attention every day when outdoors and careful attention two or three times a day when indoors is absolutely necessary. Do not change every time our friends in the U. S. do, but be ready to furnish what they need when they come back to your breed. Our great opportunities lie in being ready when their extreme habits lead them to rush our way.

To the people who propose starting I would say, do not make the mistake of going into some new breed so as to have no opposition. It would be much better for Canada if we bred nothing but Clydesdale horses for draft, Shorthorn cattle for beef, and some one breed of mutton sheep, and another of pigs, thus making a reputation that would need no booming but will draw customers from all parts. Jersey Island is known for her cattle the world over; what need for any other breed there! Scotland has Clydesdales and no other draft breed. Who would go to France for anything but a Percheron! A great success has been made in each of the countries in their special breed. Canadian farmers are too few in number to be successful in all. What we want is to unite our efforts in perfecting our most numerous, which may be taken to mean our most suitable, breeds, and thus save ourselves from those evil results that are sure to follow the division of so small a community. Our contemporary breeders are always our most profitable customers. It is impossible to be isolated in Canada: a good animal of any breed will be found and bought. I would go any distance to-day for Shorthorns or sheep that are well bred and well grown. Am shipping one car per week now, while I should be shipping two if I could find them. The supply of good horses, cattle, sheep or swine cannot be overdone.

JAMES MCMAHON, Lambton Co., Ont., writes on Dec. 6th: "We take three agricultural papers in our house, but the FARMER'S ADVOCATE beats them all. Thanks for premium for sending you three new subscribers. Better than I expected. Will try and send you more."

Prompt renewals to the "Advocate" facilitate our work greatly at this season.



THE PRAIRIE FARM HOME OF GEO. MOTHERALL, MANITOU, MAN.

The students, under the principalship of H. W. Smith, year by year conduct some valuable investigations, and are always ready to answer questions or deal with subjects submitted to them. Much can be done in this way in dealing with diseases and insects, which cause considerable loss in various districts. In connection with the school is the Provincial Farm, under the management of F. L. Fuller. Besides the growing and testing of various varieties of the different cereals, considerable work is attempted with live stock. To this end, in 1896, one of the best stock barns in Nova Scotia was erected. The basement of the main barn is 50x100 feet, with a wing in the form of an L 30x30 feet. It is equipped with root cellars, silo, feed rooms, box and single stalls, with cement floor, and constant spring water supply brought into individual cups for each stall. The live stock consists of some forty head of cattle of various breeds, about the same number of pigs, and the farm teams, which are chiefly of Clydesdale blood. The cattle are Shorthorns, Jerseys, Guernseys, and grades; and the swine, Yorkshires, Berkshires, and crosses. The crops grown consist of all those generally grown in the Province. The hay is chiefly clover and timothy, which yields in some instances the year following seeding some three tons per acre. Oats of various good varieties and under varying conditions of soils and fertilizers are grown, and yield up to over fifty bushels per acre. For green summer fodder a mixture of vetches, oats and peas are grown together. Mangels of various sorts are grown under varying conditions, and usually yield well. Turnips give encouraging returns for labor put upon them. The value of corn as a fodder crop is year by year becoming more and more appreciated. They can by careful selection of varieties and the adoption of a modern system of cultivation produce a good yield of fairly mature, rich corn for silage.

The Nova Scotia School of Horticulture is of peculiar value to the Province, being situated as it is at Wolfville, in the midst of one of the best fruit-growing sections of America. For a number of years, up to a recent date, Prof. E. E. Faville, a frequent contributor to the FARMER'S ADVOCATE, and now Professor of Horticulture in the Kansas



**The Maritime Experimental Farm.**

Regarding the above subject one of our Nova Scotia readers, an observant and progressive farmer, writes: "I am sorry to say that very little interest is shown in the above institution. Most people know there is an experimental farm at Nappan, but they do not feel that it is there for their benefit, and as for trying to find out what is being done there, few would dream of it. [NOTE.—Our correspondent is probably overlooking the annual reports, so far as they serve the purpose mentioned, of which large numbers are doubtless sent to Nova Scotia, and a copy of which may be got by dropping a post card to the officer in charge.—Ed.] So far I cannot see that the farm has done much good; not that good work has not been done there, but that the people have failed to profit by it."

Mr. Howard Trueman, a New Brunswick reader, writes: "In the strictures on the experimental farms in a late issue of your paper, the Nappan farm is singled out, and the statement is made that the management on this farm has been unfortunate; and it is hoped, now that a new manager has been appointed, a better state of things will prevail. Such a deliverance is a great surprise to the farmers of the Maritime Provinces, who have been watching the work done at Nappan, and a great injustice to Col. Wm. Blair, who for eight years was manager. The following resolution, passed by the Farmers' Association of Nova Scotia, will show how the farmers of that Province looked upon the retirement of Col. Blair from the farm. A similar resolution was also passed by the farmers at public meetings held in New Brunswick."

"D. McE. Johnson moved the following resolution which was seconded, and carried unanimously by a standing vote:

"The Farmers' Association of Nova Scotia, now assembled in session, regret to learn that we have lost the services of Col. Blair as superintendent of the Experimental Farm at Nappan."

"We are fully alive to the great interest he has ever manifested in the welfare and improvement of agriculture, and in the education and elevation of the farmers of these Maritime Provinces, ever since he entered public life. We desire thus publicly to acknowledge his great services to the farmers of these provinces, and to congratulate him upon the success he has made of the Experimental Farm, which has been in his charge during the past eight years."

"Therefore be it resolved.—That we consider the agriculturists of these Maritime Provinces have sustained a severe loss in the retirement of Col. Blair from the position of superintendent of the Experimental Farm at Nappan, and we hope that matters may be so adjusted that his services may be continued in our agricultural interests."

"I would like to say that, having personally visited the Nappan farm every year since it was started, and some years several times, I believe that, so far as Col. Blair had control, his management was all that could be desired or expected. He has few equals in the management of men. He was uniformly courteous and attentive to visitors, and impressed almost all who went to see the farm that he was just the right man for the place. His resignation was voluntary, and there was a strong pressure from men on both sides of politics to have him reappointed. There never was any question as to his management."

**COL. BLAIR NEEDED A FREE HAND.**

Mr. W. W. Hubbard, Sussex, N. B., writes: "I am informed that C. I. Blair's management of the Maritime Experimental Farm has been unfavorably commented on in your paper. Those of us down here who have visited that farm and watched its work, Mr. Editor, have been led to conclude that had Col. Blair, with his splendid organizing ability, his lifelong study of the needs of our Maritime farmers, been given a free hand to put the farm at work for their benefit, he would have been able to accomplish more than he did."

"Col. Blair, before the experimental farms were ever thought of, was doing most valuable work, as a practical farmer and in the Legislature, for Nova Scotian agriculture. The suggestion that the new manager should effect great improvements is rather amusing to farmers down here who knew Col. Blair. Mr. Robertson will receive fair play, and be closely watched by our people, who, it must be confessed, without offering any disparagement to him, take the appointment of a man from Quebec as an insult to our Maritime farmers."

[NOTE.—Some of our readers will doubtless remember that Col. Blair was superintendent of the farm until early in 1896, when he was succeeded by Mr. Geo. W. Forrest, who held office till recently, but the FARMER'S ADVOCATE, in dealing with this subject, specified neither. Unless the cap fits it need not be worn. Mr. Hubbard emphasizes the important point, however, that Col. Blair was not given a free hand to put the farm at work for the benefit of the Maritime farmers; otherwise he would have been able to accomplish more than he did. There is a trace of sectional feeling in Mr. Hubbard's note which, in this year of grace, 1897, when a strong united national sentiment and the cause of agriculture throughout the Dominion are both forging ahead, Canadians West as well as East can afford to discard. Besides, if it be desirable to give the experimental farm superintendents, or heads of departments a freer hand to develop their capacities and work for the benefit of those who foot the bills, we cannot well restrict the Minister of Agriculture in his choice of men, for by their fruits we shall know both Minister and officials.]

**Poultry Record.**

To the Editor FARMER'S ADVOCATE:

SIR.—I am sorry to see that in my letter, headed "Keep a Record of Each Hen," I made one sentence too long, so that it had to be divided, as the full stop got in the wrong place to show my meaning. The part referred to should have read: "Of course, the henhouse would need to be visited at frequent intervals, to avoid unnecessarily long confinement of the hens. And to avoid eggs being broken the nest-box would need to be in two parts," etc. I should have made it clearer. "X. Y. Z."

**The Decadence of the Cow in Manitoba.**

BY WALTER LYNCH, WESTBOURNE, MAN.

In my reply to your request for some notes on cattle breeding in this country for a quarter of a century I shall have more to say of the people who breed the cattle and their methods than of the cattle. The very determined way in which these people persist in looking at things in the wrong way often reminds me of that observant individual who first noticed that "large rivers always run past large cities." Twenty-eight years ago, when I first saw the cattle of this country, there were not very many of them, nor did they show very fine breeding, but they were good, useful cattle, large, strong, active oxen and steers, and cows with udders and milk developments that makes the dairyman who knew them sit down and cry when he compares the cows he can get now with them. Shortly after this time pure-bred bulls were brought to the country, all that I knew anything of being Shorthorns, and however much better some other breeds may be, they certainly made a great improvement in the cattle of this country. Money was not very plentiful in those days, but there were not so many political meetings and conventions of all kinds to attend as now, and people had a little time to mind their own business, and their business was to improve and increase their herds. Scarce as money was, most people managed in some way to secure the services of a good bull, and the change in the number and quality of their cattle in a few years was marvellous. It was a pleasure in those days to go out with a neighbor to see the cattle; great, big, thick, straight, level steers that had never seen a pound of grain and only eight or nine months of hay, that at thirty months would dress seven or eight hundred, and large, handsome, breedy-looking cows, with udders the size of a large bucket, followed by calves weighing six or eight hundred pounds, was a sight to delight the heart of any stockman. It is doubtful if there was a calf or any young thing shown at

cow are sensible, level-headed men in every other respect; they would not think of trying to run a plow or binder without a team, nor would they think of working their teams without feeding them; nor do they expect their pigs to get fat or their hens to lay eggs without food. But, when it comes to their cattle, they seem to think that in some miraculous way they ought to make milk and beef out of nothing; and as they give them such a liberal supply of it, they are disappointed with the result and dissatisfied with the stock end of "mixed farming," and want to change their breed of cattle.

If these men can ever be induced to begin at the other end of this problem, and realize that cattle cannot work without food any more than horses or pigs can, and that although good breeding does one-half towards the production of a good animal, good feeding does the other three-quarters, there will be an improvement in their cattle. But I shall never again see such cattle on these plains as were here fifteen years ago.

How can this state of things be remedied? There is only one way. They must have more food, and better food, and cheaper food. And there is no food that can compare with lots of grass. There is an old saying, that "an animal well wintered is half summered." I would add to that, an animal well summered is a good deal more than half wintered. And if I were to add another suggestion it would be, a little more grass.

**Sugar Beets in Germany.**

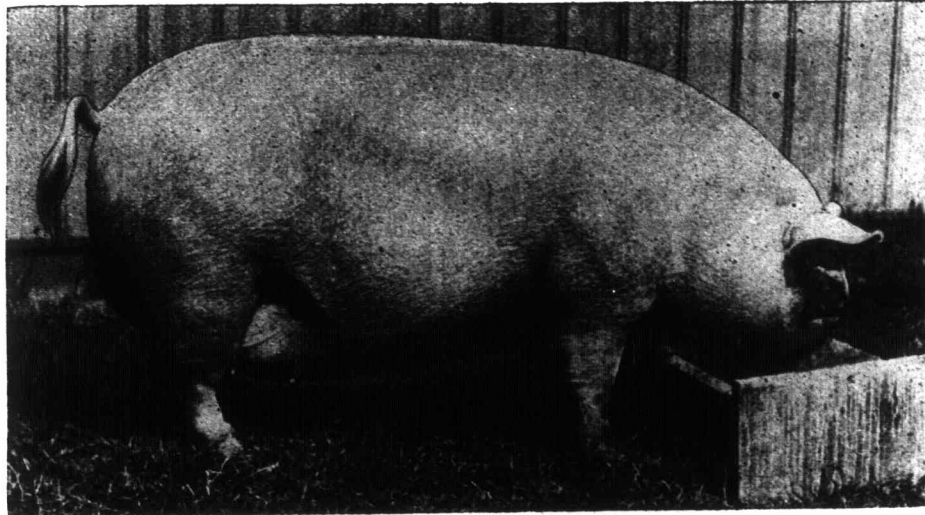
The following interesting letter describing the growing of sugar beets in Germany and the making of sugar therefrom has been received by the Ontario Department of Agriculture from Prof. Shuttleworth, the chemist of the Agricultural College at Guelph. It will be remembered that Prof. Shuttleworth has gone to Germany to continue his studies in agricultural chemistry.

"During October, while the sugar beets were being dug, an opportunity was afforded me to collect a little information regarding the cultivation of sugar beets for the production of sugar. This information, the result of personal observation, may be of interest to Canadian agriculturists.

"There are in Germany four hundred sugar beet factories. These factories are in operation from the latter part of September till about Christmas. That is, they work practically three months in the year, lying idle the remainder of the time. But during these three months they work both day and night. Two full sets of hands are required—one for day and the other for night. Each factory has at least two chemists—one who works during the day and the other during the night. An average factory, during the portion of the year it is in operation, consumes about 700,000 centners of beets, for which the farmer receives about twenty-five cents per centner, depending, of course, upon the quality of the beets and the demand for sugar. This year the farmers are receiving on an average one mark

per centner. One centner is equivalent to about 111 American pounds. Eight hundred centners per hectare (2.47 acres) is a good average yield of sugar beets this year in Germany. It would therefore appear that some 350,000 hectares of land in Germany is devoted annually to the growth of sugar beets. This land together would form 8,645 farms of 100 acres each. These figures furnish a very correct conception of the vastness of the beet sugar industry in Germany.

"The German farmers have learned how to grow beets containing a maximum quantity of sugar. Early in June the fields of sugar beets had much the appearance of Canadian fields of sugar beets in October. That is to say, the leaves were so spread that the rows were quite untraceable. In conversation with an extensive farmer, I was informed that the farmers understand that average-sized beets growing deeply into the soil, and free from branching roots, are the most profitable to grow. They aim to produce a beet whose diameter through the top measures about three inches, whose length from top to tip measures about 12 inches, and which tapers gradually from top to bottom, with smooth surface, free from large side roots. To this end, no farmyard manure is applied the year the roots are grown, but two years previously, allowing a grain crop to be grown the year following the application of the manure, and preceding the sugar beets. The previous autumn—that is after the grain crop is off—the ground is plowed once, but to a great depth—fully twelve inches. This requires strong plows and two span of heavy horses, or often two yoke of oxen, to each plow. This depth, I am told, is to provide a deep soil that the roots may grow well into the ground. Nothing more is done to the ground until the spring, when it receives a thorough surface cultivation and a dressing of nitrogenous and phosphatic artificial manures, which cost the farmer ten dollars per acre (this is calculated from 96 marks per hectare). The roots are grown in rows twelve inches apart, and eight inches apart in the row. It is quite evident, therefore, that there is very little cultivation given after the plants are up. Most of the thinning of these im-



MISS STAMINA, A PRIZE-WINNING YORKSHIRE SOW, OWNED BY J. E. BRETHOUR, BURFORD, ONT. SEE PAGE 557.



mense fields of roots is done by women. It is quite common to see forty or more women working together in one field. In Germany the women are always in the majority in the fields, owing, in all probability, to the men having to serve in the army.

"Towards the end of September, and during the month of October, the beets are taken up and drawn or shipped to the factories. This work is done in the most primitive, but probably the only practicable manner. The roots are loosened from the ground by a spade and placed in rows with all the tops pointing one way. Another company follow the diggers and cut off the tops with large knives. The roots are then either thrown into wagons and drawn immediately to the factory or carried to large piles and pitted until drawn away. In either case withering in the sun is avoided.

"As they arrive at the factory, samples are taken, weighed, washed, and weighed again, from which the percentage of earth is calculated and deducted from the weight of beets received. From time to time samples are taken and submitted to chemical analysis. The price paid to the farmer for the beets is based upon the results of the analysis.

"In visiting one of these sugar factories, through the influence of my letter of introduction from the Ontario Department of Agriculture, I was shown special kindness by the director, who explained every stage in the process of manufacturing the sugar, and furnished all information desired. It is quite unnecessary to dwell upon details in the processes of the production of the sugar. But the whole operation is exceedingly interesting, yet quite simple. In this factory I was informed that the beets yielded 11 per cent. of first-class and from 1.5 to 2 per cent. of second-class sugar, and about 2 per cent. molasses; or a total yield of between 14 and 15 per cent. It appears that the percentage of sugar in beets is affected by sunlight very considerably. It is as much as 2 per cent. higher after a sunny than after a dark or dull summer. 'You should in Canada,' said an experienced grower of

beef cattle, but it gradually died out and farmers took to raising hay for sale and export, which is being largely carried on at present. A problem which has been discussed at every meeting of the Maritime Stock Breeders' Association is, why have the farmers in this fine agricultural county gone to selling hay in place of raising cattle? Some attribute it to the low price of beef, while others to the importation of cattle by our Provincial Government.

So far as the rearing of sheep is concerned, more should or could be kept by nearly every farmer I know of, but to my mind most farmers need a little education about farming before they attempt the rearing of sheep. That we have large areas of land suitable for sheep pasture is true, but it needs cultivation and the growing of proper grasses in order to afford good pasture for sheep. More care should also be taken of the flock during the fall and winter months. Leicesters, Cotswolds, and Shropshires all do well when they receive proper care and attention, though I sometimes wonder if the Cheviots would not be most suitable to some parts of New Brunswick, especially the dry, hilly portions.

Swine, like sheep, are too much neglected by many farmers, and not enough are kept, though better bred hogs are now being kept in many portions and there are several right good herds of pure-bred hogs in these Lower Provinces, but the export trade, I think, has not as yet assumed such dimensions as to warrant the farmers to produce nothing but the bacon hog; at least, that portion of trade has not yet reached here to any great extent, and until it does a hog that matures early and fattens most readily is best suited for these Provinces, and there is still good demand for good fat pork in the local market, though there is more tendency to use bacon for that than formerly.

In regard to the class of sheep that is most desirable, I should say that the sheep that will make the most wool and mutton on the least feed would be most desirable in most parts. Prince Edward Island is doubtless a better place for the rearing of sheep than any other part of these Provinces, which

2nd. To the first one of our present subscribers at any post office in Canada sending us his or her renewal and one new subscription within the next 30 days (that is up to January 15th), we will send one binder post free. All others at same post office sending in renewal and one new subscriber will be allowed their choice of premiums offered on pages 514, 530 and 531, December 1st issue, for obtaining one new subscriber.

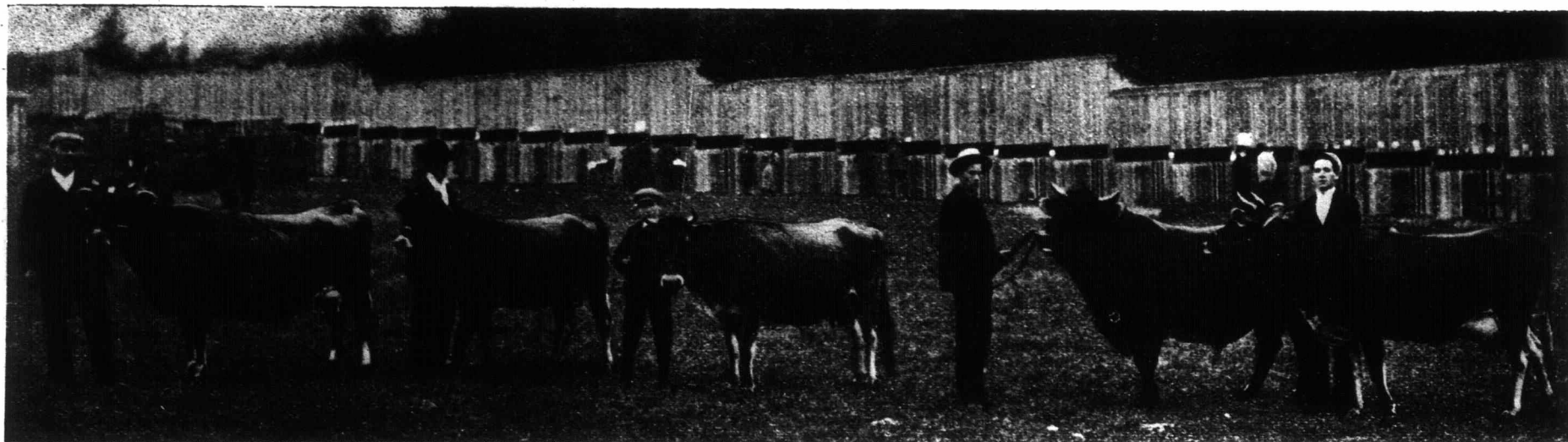
3rd. Any one not able to secure new subscribers as above described may obtain a binder, which will be sent, post paid, for 75 cents cash.

Readers interested in other premiums, such as Bibles, books on agriculture, watches, jewelry, Collie dogs, etc., will find full particulars on pages 514, 530 and 531 of our December 1st issue.

### The Improvements Needed in Nova Scotia Stock Rearing.

BY JOHN GREGORY.

The general farm stock in Nova Scotia needs improving, especially in Antigonish, Cape Breton, and the eastern counties. Pure-bred sires are rare, and pure-bred females even rarer. It is seldom that an animal is to be seen showing distinct characteristics of any particular breed. Some exception may be made in the matter of sheep and pigs, as a good many of the sheep show some Shropshire, and the pigs have some Chester White and Yorkshire blood in them. Improvement is very slow. The agricultural societies do what they can by importing pure-bred animals for the use of members, but as the societies are poorly patronized they cannot do much. In the western counties the conditions are much better, and there are to be found herds of pure-bred animals representing nearly all the breeds to be found in Canada, but little is known of them outside their immediate vicinity. In New Brunswick the conditions are very much the same, but general improvement is taking place more rapidly. I have not much personal knowledge of Prince Edward Island stock, but I believe it is somewhat better than in either of the other two Provinces, and is quickly improving. Dairy farm-



FIRST PRIZE HERD OF JERSEYS AT THE PROVINCIAL EXHIBITION, NEW WESTMINSTER, B. C., 1897. THE PROPERTY OF A. C. STREET, CHILLIWACK.

sugar beets, 'owing to your great amount of sunshine, produce beets containing a high percentage of sugar.' My answer was simply this: 'We can.' A. E. SHUTTLEWORTH.  
"Gottingen, Germany."

### Horses, Cattle and Sheep in New Brunswick.

BY M. H. PARLEE, KING'S COUNTY, N. B.

I think more attention should be given to the breeding of heavy horses, especially in N. B. I contend that our horse stock is gradually deteriorating on account of too much attention being given in late years to trotting and race horses. A few years ago at a local exhibition held here a very good display of heavy horses would be seen as well as driving or light horses, but now, I regret to say, it is different. Draft horses are not only few but inferior. Too many trotting stallions have been bred to our common mares, and the result is neither trotters nor work horses. Years ago our Agricultural Society gave great attention to horses and purchased a very fine Percheron stallion in Illinois. He was kept here three years, and during that time left some very fine stock, most of which was afterwards sold to Americans who came here to buy heavy horses, and a great many span of heavy horses were sold at good figures. Some heavy stallions have since been brought here, but owing to the decline in price of horses, were little used.

In regard to cattle, some localities in this Province as well as Nova Scotia are well adapted to the rearing of beef cattle, namely, the counties of Carleton, Westmoreland, portions of Albert and Kent in New Brunswick, Cumberland and those counties in the Annapolis Valley in Nova Scotia; other portions are better adapted to dairy stock. The county of Westmoreland, with which I am most familiar, was at one time a great place for raising

I attribute largely to there being better pasturage there than here.

Briefly speaking, first, I contend that heavy horses deserve more attention from farmers; second, beef cattle are most desired in some localities, while dairy in others; third, sheep and swine both need more care and attention and more extensive rearing.

### Our New Self-binder.

In response to repeated enquiries from large numbers of our readers who desire to preserve the issues of the FARMER'S ADVOCATE as they appear from time to time throughout the year, we have for a long time been in search of a suitable binder, and have at last secured what is wanted. It is at once handy, neat, handsome, strong and durable; black duck back, and cloth sides, with gold lettering. Each copy of the paper, as it is received by the reader, can be securely fastened within the binder, presenting the appearance of a fine cloth-bound book. In this way the paper can be preserved for reference, thus doubling its value to the reader. At the end of the year the copies can be taken out and bound permanently or otherwise preserved. The files of the FARMER'S ADVOCATE constitute a volume of practical high-class agricultural matter, thoroughly up-to-date, such as can be got in no other way, in a few years making an invaluable agricultural library. We answer hundreds of important questions during the year, and readers by thus preserving their copies can at any time refer back with less trouble than writing again to the office. Breeders and others desirous of referring back to show reports, prize lists, etc., will find it of very great service. We desire to see one of these binders in every neighborhood in Canada, knowing that where one goes others will follow. In order that all our friends may secure its advantages at an early date, we make three propositions:

1st. We will send this splendid and useful premium, post prepaid, to any one sending us two new yearly subscriptions.

ing has taken a great hold upon the farmers of the Maritime Provinces during the last few years, and is rapidly becoming more general, especially in New Brunswick and Prince Edward Island. Nova Scotia was the first to establish cheese factories, but their number does not seem to increase. Very little winter dairying is done in any of the Provinces.

By far the greatest industry is the raising of beef cattle, but these are not of a class suitable for export, being too small and not fat enough. Very little stall-feeding is done, all gain being looked for from the pasture in summer. Nearly every farmer keeps a few sheep, and quite a large business is done in lambs for export to U. S.; but as wool cannot be sold for cash, but has to be traded off at the stores or mills for goods or cloth that in many cases is not needed or wanted, the number of sheep kept is not as large as otherwise might be. Pigs are also kept only in limited numbers, a farmer seldom raising more than two or three. This is caused principally by the fact that we have had no demand for pork. We have no packing establishments, and the merchants import large quantities of cured bacon and hams, which further lessens the demand for home-grown pork. A representative of Messrs. Davies & Co. is now in the Maritime Provinces looking up information with a view of establishing a packing-house. I pray that sufficient encouragement may be given him to warrant him in reporting favorably upon the scheme.

As to what lines in which improvement should be directed it is hard to say, as improvement is needed in all lines. As dairy farming is increasing, one would naturally say that the breeds of cattle adapted to that system should receive special attention; but from the returns which I have of the recent sale of pure-bred cattle imported by the Government of New Brunswick, I notice that the prices received for Shorthorns and Herefords were greater than the prices paid, while for Ayrshires, Holsteins, Gurnseys, and Jerseys the prices received were in nearly all cases much below those paid for the animals. This would seem to show that the demand tended towards cattle more particularly suited



for beef. There is great room for improvement in both cattle and sheep, but the demands of our own market is not such as to bring the fact forcibly to the notice of the farmer.

We have no breeders of pure-bred horses in the the Lower Provinces that I know of, and the conditions are not such as to encourage any one to establish a stud, and the low price that must now be charged for service tells against the purchase of a pure-bred sire. When \$100 is a high price for a really good horse, the average farmer had better leave horse-raising alone.

**The Purity of Canadian Butter.**

To the Editor FARMER'S ADVOCATE:

DEAR SIR,—I am in receipt of your favor of the 2nd inst. I had observed the paragraph in the report of the Secretary of Agriculture for the United States, which said: "The products of the United States and of Denmark have been found to be the only absolutely pure butter imported into England; all others, including the product of British colonies, contain more or less injurious ingredients, used as preservatives." This statement, so far as it refers to Canadian butter, is entirely untrue; and I am surprised to find in the official report of the Secretary of Agriculture a positive assertion like that, which has no foundation in fact. I do not know of even an unfounded rumor published in Great Britain or in Canada which could give a pretext for such an official remark. It is true that Canada is not now a British colony in the usual meaning of that word; but Canadian products are considered in Great Britain as being included in the designation "colonial." For the butter products from the Australasian colonies I am not able to speak, although what of them I have seen have been of excellent quality.

Canadian butter and cheese are free from adulteration; and imitation butter and cheese, although manufactured in enormous quantities in the United States, are not made at all in Canada. The manufacture, importation and sale of them are prohibited by statute.

What is true of the competitions between individual sellers of goods seeking the preference of possible customers is true in the case of countries seeking an outlet and new markets for their products. No real advantage can be obtained by any salesman in his private capacity or by the representative of a country's interests, in his public utterances, through casting unworthy and unfair imputations on the quality of the goods of a competing seller.

Yours truly,

JAS. W. ROBERTSON,  
Commissioner.

Ottawa, Dec. 4th, 1897.

**Ontario the Great Stock Center of America.**  
BY J. E. BRETHOUR, BRANT CO., ONT.

I think that you would make no mistake in drawing special attention to the swine industry of Canada, recommending farmers to produce more hogs of the type demanded for the English market and endeavor to change the system now so prevalent of having most of their hogs ready for sale in October and November, when the packers take advantage of the large number of hogs offered at that time, and the price is cut down so low that very little profit is left for the feeder.

Greater attention should be given to the breeding of pure-bred sheep to supply the increasing demand for males to use upon the ranches in the Western States. The demand is now so great that the American buyers cannot secure one-half what they require.

There is no reason why Ontario should not be the great stock center for the whole continent. We have the climate, the foundation stock, and the men that are capable of competing with the world in this work.

**Christmas Number for New Subscribers.**

We have printed a sufficient number of the present (Christmas) issue of the FARMER'S ADVOCATE so that all new subscribers whose names reach us up to December 31st will receive a copy free. Present subscribers desiring extra copies for sending away to friends can secure them while the supply lasts at 10c. each; non-subscribers, 25c.

In another article in this issue we give particulars of the new self-binder for the FARMER'S ADVOCATE which we have secured. Information regarding book, jewelry and other premiums will be found on pages 514, 530 and 531 of our December 1st number.

**Ontario Fat Stock and Dairy Show.**

The fourteenth annual Provincial Fat Stock and Dairy Show, held in the City of Brantford, Dec. 7th, 8th and 9th, proved a record-breaker in point of number of exhibits, exhibitors, and visitors, while the quality of the stock shown was fully up to the standard of the best of its predecessors. The people of Brantford proved equal to the occasion, and did their part nobly in their patronage of the show and in the entertainment of exhibitors and visitors. We took occasion some months ago to assure them it was their privilege to entertain the representatives of the highest type of Canadian farmers in the persons of the directors and exhibitors of the Fat Stock Show, and now that the event is over we are confident the good people of Brantford realize that it was good for them to meet and mingle with the men who make the show, and who are the advance guard in the grand army of stock raisers, the representatives of the most important industry in the country. The farmers of Brant and adjoining counties manifested a lively interest in the enterprise by coming out in goodly numbers to the show, making the receipts for admission more than twice as large as at any previous show, and we are sure they were, without exception, well repaid for what it cost them. The study of such an exhibition is an education and an inspiration to a farmer and a pleasure to the average visitor. The Grand Trunk Car Shops, liberally granted for the purpose of holding the show, afforded ample and comfortable accommodation for the extensive exhibits, and the management of the show by the officers and directors, the largest share of which fell to the lot of Secretary Hodson and his staff, was exceedingly creditable to all concerned. Mr. Hammer made a model superintendent, systematizing his work, classifying the stock properly, and with the concurrence of the exhibitors, keeping everything in creditable condition. The judges were well chosen, and performed their work honestly, worthily, and well. The exhibitors were a good-natured class, modestly wearing the honors won and manfully taking

ribbons and packing of his sides, with freedom from paunchiness, made him a prime favorite from a butchers' standpoint; but the judges looked through breeders' eyes and handled with breeders' hands, and no doubt looked further than today, and placed the fleshy, well-proportioned, mellow-handling white first on the list. James Kenzie, Wick, had a right good one in a roan son of Valasco 22, by Indian Chief, full of good quality and finish. He was placed third. There were four entries of steers under a year and J. Fried & Sons, Roseville, got to the front with a red-roan son of Lord Abbot, by Indian Chief, a lengthy, level, good-fleshed calf, promising well for the future, as well as being right for today. Second place was given the blocky, thick-fleshed white calf shown by H. & W. Smith, another of the get of Abbotsford. Jas. Oke, Alvinston, got into third place with a well-proportioned red calf that will probably make a higher mark later on. In cows over three years there were only two forward, and first place was given to Fried & Sons, for Blenheim Cherry, a red of fine form and good flesh, the second going to Capt. Milloy, Paris, for a useful cow. In heifers, two years and under three, there were three entries, and the first prize went to James Rennie, for Lilly of Layton, a beautiful white heifer, finely finished and full of first-class flesh. Capt. Milloy owned the second and third prize heifers, which were good specimens, though not so highly fed as to rank high in strong company. Fried & Sons had the winner in the section for heifers under two years—a lengthy, thick-fleshed roan, by Lord Abbot, the second prize going to a blocky red heifer owned by Mr. Oke.

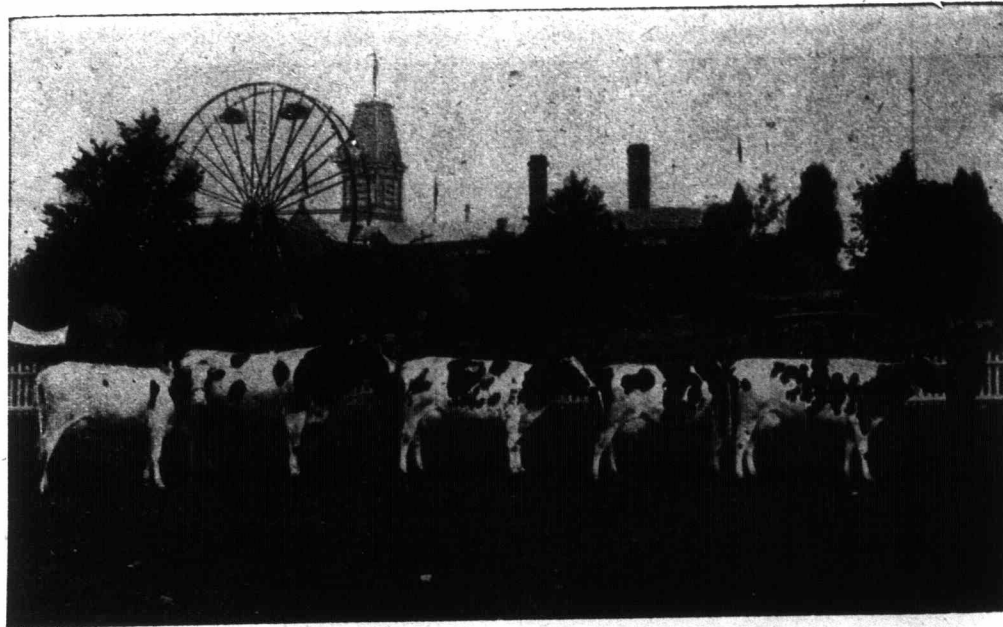
Herefords and Polled Angus were classed together and made a stronger show than in any previous year, many of the animals being of a high standard of quality, and the competition close and keen. The exhibitors of Herefords were H. D. Smith, Compton, Que., who showed five head; W. A. Riechart, Buffalo, N. Y.; and F. W. Stone Estate, Guelph. Polled Angus were shown by James Bowman, Guelph; Walter Hall, Washington; and John Rutherford, Roseville. The call for steer or heifer, two years and under three, brought out, amongst others, the famous Jack winner of the grand sweepstakes prize for best of any beef breed at the

New York Show in 1896, and also at the American Fat Stock Show at Chicago last month. He is a model Hereford of the modern type, lowest, smoothly turned and thickly fleshed, and no doubt made a very strong show when he won his honors, being then in good hands and in full bloom; but the change of feed and feeder and the fatigue of travel had taken the shine off him, and his flesh had not the firm, smooth touch found in a fresh show bullock. He had gone off on his legs, had got slack in his crops and flabby in his handling, and consequently showed at a disadvantage, but was a steer of a grand type, with excellent under line and full twist and thighs, and at his best must have been a very creditable production. The Stone Estate showed Royal in the same section, and a royal good one he was, quite surpassing his rival in the firmness and smoothness of his flesh, the spring of his ribs, and the fullness of his crops. He was, however, light in his hind quarters, twist and thighs, and had an excess of weight in his fore-quarters in proportion to that where the higher priced meat is found; but he was a credit to the man who fed him, and would stand high in any competition. Mr. Smith, Compton, had a good third in his straight, level, smoothly-turned

and well-proportioned Bonham, who was young for the class and therefore at a disadvantage, besides being in exceptionally strong company. Mr. Smith had a clear winner in the class for yearlings in his heifer Fairy of Ingleside. She was long and level, with grand quarters and crop, well-sprung ribs, and carried a wealth of natural flesh. Mr. Bowman had a strong number for second place in Ian of Tweed-hill, and the Stone Estate had a good steer which fell into third place. In the section for steer or heifer under one year the black-skins won all the prizes, first honors going to Water Hall, for Robin, a grand young steer, smoothly and thickly fleshed, one of the best things in the whole show. Mr. Bowman had two beautiful heifers, which were rated second and third. Polled Angus only were entered in the section for cow or heifer, and Mr. Bowman filled the 1st.

Walloways and Devons were grouped together, and the exhibitors were D. McCrae, Guelph, and A. M. & R. Shaw, Brantford, for the former, and W. J. Rudd, Eden Mills, for the latter. The cattle were not in high show fix, but were good representatives of the breed—full of good flesh, and would make excellent beef, from a consumer's standpoint. Mr. McCrae won first with College Bright Eyes as a two-year-old, and first and second for heifers under a year. Mr. Rudd had first for cow, a right good one; first and second for steers 1 year old; second and third for steers 2 years old. Messrs. Shaw won second for cow.

Grades and Crosses made exceedingly strong classes both in respect to numbers and the character of the exhibits, Shorthorn grades predominating as usual, but an increased number of Hereford grades competing. Ten high-class steers contended for the prizes in the section for over two and under three years. Fried & Son's red Shorthorn grade, Look-Me-Over, was in no immediate danger of being overlooked, even in such high class company. He is a model steer in every particular; blocky, deep, level, and smooth, full of good meat in the best parts, and finely finished. He was found to be one of the very strongest claimants for the championship of the show. Rennie had a capital roan steer, a fine type, with a grand top, but a bit light below. He was given second place, and Peter Marshall had a strong number for 3rd prize in a Hereford grade of great size and good quality.



Count Mink Mercedes. Mondamin's Da'sy Barrington. Inka Rose Pieterje DeKol. Queen DeKol 2nd. Cornelia Artie. GOLD MEDAL HERD OF HOLSTEINS AT OTTAWA, 1897, THE PROPERTY OF G. W. CLEMONS, OF ST. GEORGE, ONT. SEE PAGE 557.

their medicine when rated lower than they reckoned on. The number of entries was in excess of any former year, the total as compared with last year being:

	1896.	1897.
Beef cattle.....	90	111
Dairy cattle.....	20	41
Sheep.....	279	292
Swine.....	150	222

**CATTLE.**

Of cattle, there were 111 entries, independent of sweepstakes, and the average was of a very high order of merit, while a larger percentage than usual was equal to the standard of first-class. The judges were Robert Miller, Brougham, and James Smith, Brantford, and they did good work from start to finish.

Shorthorns being the first class in the catalogue, the call for steers two years and under three brought out two white ones that stood the test of higher criticism. H. & W. Smith of Hay, showed Bruce, by Abbotsford; dam Bonnie Brae; a fully finished butcher's beast, carrying a wealth of firm flesh, smoothly laid on and evenly distributed, his back being thickly covered, his crops filled full to the line, his ribs well sprung, and his handling such as to suit the most fastidious judge. He stood straight on his legs, and while fully ripe was in no sense overdone, but active and in fresh bloom. He could not be denied first place in his class, and from the start was considered a strong candidate for the highest honors of the show.

James Leask, Greenbank, showed Indian Chieftain, bred by Arthur Johnston, and sired by Imp. Indian Chief, and out of a Crimson Flower cow. He was full of first-class quality, a deep-bodied, thick-fleshed fellow, and a good sort, but young for his class, and not so forward in condition as to show to full advantage.

In yearling steers there were six entries, which made a very strong class. The contest for the first honors was narrowed down to one between H. & W. Smith's White Banockburn, by Abbotsford, and A. & F. Bolton's (Armstrong's Mills) Barney, a red son of King of Marden. The latter had many admirers outside the ring; the fine spring of his



John Campbell, Woodville, brought out two capital steers in the yearling class, grandsons of Imp. Indian Chief, we believe; model butchers' beasts, much of a kind, strong and straight in their backs, evenly-fleshed, and free from all appearance of excess of offal. They were closely matched, and must have first and second places, the only difficulty being to decide which should have pride of place. Steers under a year were eight in number and uniformly good, first prize being given Leask's white Shorthorn grade, a big, lusty, thick-fleshed fellow; closely followed by H. D. Smith's Hereford grade, resulting from two crosses of Hereford bulls on a common cow, a fine example of the potency of Hereford blood in grading up. He is a grand calf, lowset and level, with long quarters, thick flesh, and a grand coat of hair. John Campbell had a good one, which fell into third place. A strong class was that for cows three years and over. First prize went to James Oke for Maud, a red cow of fine quality, low and thick and smooth; second to Bowman for an Angus cow, long and smooth; and third to Rennie for a roan cow of fine form and quality. Heifers under three years were an excellent ring, and Mr. Oke got to the front with Morrison Lassie, a broad, deep, and well-fleshed red heifer; Leask coming into second place with a well-proportioned roan daughter of Moneyfuffel Lad, smooth and evenly-fleshed. In the section for heifers under two years there was keen competition, the first prize ribbon going to Oke's Mina, a heifer of great scale and fine quality. Fried & Sons took second place with a handsome and well-finished white heifer, and Mr. Smith, Compton, won third prize with a Hereford grade of fine form and quality.

**Grand Sweepstakes.**—The most interesting feature of the show was the final contest for the best beef animal in the show of any age, breed or cross. An excited crowd awaited with bated breath the examination of the claimants for this high honor. The first prize animals in a dozen different classes were marshaled for the fray, and the tension of suspense was heightened by the knowledge that to some extent the contest was an international one, since the American champion was in the fight, but when the examination neared a close and the strongest numbers were placed according to the rating of the judges, it was found that the white Shorthorn steer, Bruce, owned by H. & W. Smith, Hay, Ont., stood at the head of the line; Fried & Sons' red grade Shorthorn, Loo-Me-Over, holding second place; and the Hereford Jack, the champion at New York and Chicago, being placed third. As the championship ribbon was placed on the back of the white steer, cheer after cheer resounded through the building, and congratulations were showered upon the happy owner of the champion of the continent.

#### SHEEP.

Those who predicted that changing the location of the Ontario Provincial Fat Stock Show would effect the sheep exhibit adversely were wrong. The facts are, there were this year over 350 entries, and nearly all were present. The success of the exhibit would be only half told were simply the number of entries given, for never has there been forward such a high average of exhibits. The men who follow this show from year to year are ambitious men, and when they are defeated one year they seek to come out stronger next time; while those who win exert every effort to remain at the top, knowing that retrogression is hard medicine to take. In a number of classes, sheep that would have led a very few years ago found themselves down on the list in this late contest. The classes were generally large and of such a uniformly high order that judging was a difficult and slow task. When the night of the second day arrived the classes usually done at that stage of the show were not much more than half finished, while two sets of skillful judges worked faithfully from 10 a. m. till evening.

**Cotswolds** were the first to be called out. Entries were brought out by John Park & Son, Burgessville; Geo. Allen, Oriel; Wm. E. Wright, Glanworth; John Rutherford & Son, Roseville; and J. G. Snell, Snelgrove. In shearing ewes Park & Son secured the first and second awards, and Allen the third, on typical, well-matured, strong, fat sheep. There was little to choose between them, but the firmness and evenness of back seemed to guide the decisions. Ewe lambs were seven strong, shown by Park & Son, Allen, and Snell, but no one had a walker. Their even, flowing coats, well-covered heads, and best of all, firm, fleshy carcasses, were of the same even character as their older sisters. Park & Son won first and third, with Snell second, and Allen highly commended. It will be strange if we do not see some of them back again next year, as they are just right to push ahead. The third prize lamb was perhaps the fattest of the class, but not as firm as those above her. Four yearling wethers swaggered out to their call. Rutherford & Son are hard men to meet in wethers, and this year they were too much for their rivals. They won first and third on a very ripe pair of sheep, the former a bit off the ground, but such a depth of firm meat as he carried! Park & Son came second with a model Cotswold, broad, mellow, and handsome. Wright stood fourth on a good sheep, quite fat enough for our taste. Wright and Park & Son were alone in wether lambs, with second and third respectively. The former was perhaps as easy first as any class leader of the day, while every sheep in the lot was a good one. The winner was not only typical and ripe, but he was a marvellous combination of size and quality. Park & Son won second and third. In three wether and in three ewe lambs Park & Son won first and third, with Wright second with males and Snell second with females. Judges—E. Parkinson, Eramosa, and Jos. Gaunt, St. Helen's.

**Lincolns**—This mammoth breed has for years been brought out by Messrs. Gibson & Walker, Denfield, and Wm. Oliver, Avonbank, both in character of animals and fitness, in a manner on which little improvement could be made. The former firm has licked all breeds on more than one occasion, and came out again this year with the same class of beauties as ripe as ever before. In the two single ewe classes Oliver competed, and won second on a yearling of great scale, carrying a wealth of firm mutton from end to end. He also won a fourth in either of the sections. Mr. Oliver's entries did not look their best, as they had evidently been recently too closely housed, rendering their fleeces wet and flabby. With the exception of another prize—a third—taken by Rutherford & Son on a yearling wether, Gibson & Walker cleared the board, winning in all, outside of sweepstakes, six firsts, five seconds, three thirds, and one fourth. There was not an indifferent sheep in their collection, while their coats and condition left nothing to be desired. Judges—E. Parkinson, St. Helen's, and J. G. Snell.

**Leicesters** were shown by Messrs. Whitelaw Bros., Guelph; Orr & Lilloco, Galt; Wm. A. Rennie and John Kelly, Shakespeare. This breed too was almost above criticism; indeed, their average excellence was equal to that of the Lincolns. The men mentioned as exhibitors are shepherds, and no mistake. Their ideal is little short of perfection, and they arrive well nigh that mark. The shearing ewes, four in number, were very high-class Leicesters, and were ripe for the block. Rennie stood first and third, Whitelaw Bros. second, and Orr & Lilloco fourth. The last named has gone on wonderfully well since the Toronto exhibition. Seven ewe lambs of the same desirable pattern competed. The judges took a long time to decide their positions. Rennie again led, with Orr & Lilloco second and third, and W. Whitelaw fourth. Firmness and evenness of back seemed to be most sought after. Leicester wethers were four strong; shown by Kelly and Orr & Lilloco; two each. They were strong rivals, of great individual excellence. Kelly won first and fourth awards. Orr & Lilloco had forward the only wether lambs, winning first, second and third on singles and first on three.

took all but the second premium, which was secured by Campbell. Shearing wethers were not as uniform in appearance as the ewes, but the difference was more of length of wool than of carcass. Hanmer won first on a very strong sheep weighing well nigh 300 pounds, and he had not long been shorn. He looked small, but he is all there, without weak spots. Campbell won third on a sheep of much quality, and of medium size. His back was well clipped down, which gave him a firm feel. Gibson's number followed—a ripe, refined, good one. The class had nine in all. Thirteen wether lambs like these were would have caused many sets of judges to heave a sigh; but the job was gone at by Messrs. Mortimer Levering and Henry Arkel in a businesslike and confident manner, and soon the choicest were drawn to one end of the line. Gibson's Chicago winner had nothing to fear, as he is a remarkable lamb. One would be almost led to question why such a lamb was ever castrated; but after a few such victories as this fellow has had, the question answers itself. Beattie came second with a bit larger sheep; indeed, hard to fault. It took an exceptional one to defeat him. Campbell's and Wright's entries followed next in order, leaving many dandies out in the cold. In wether trios Gibson led, followed by Beattie and Wright, and in female lamb trios Hanmer & Sons won first and second, and Campbell third.

**Southdowns** were shown by John Jackson & Son, Abingdon; A. Telfer & Son, Paris; A. Simenton & Son, Backheath; T. C. Douglas, Galt; R. Gibson, Delaware; W. H. Beattie, Wilton Grove; and Geo. Baker & Son, Simcoe. These men are all learned in the business of fitting show sheep and exhibiting them, and therefore are fully aware of the needs in order to win. In the who a number of entries there was not a poorly-fitted animal, and nearly all were of high-class breed pattern. Jackson & Son have long since set the pace at a high clip, but their competitors are now right amongst them. Five handsome shearing ewes competed. Jackson won first and third, Telfer coming between with a deep, thick, uniform number. Douglas stood fourth. The ten ewe lambs gave the judges a task not easily disposed of. The race lay between Jackson's and Simenton's best entries. They were as snug and handsome as one could imagine, both beautifully covered, well developed, fat, and firm. The award might have gone either way without apparent injustice. Simenton led, however, with much pride to himself and flock. Douglas stood third on a lamb of larger type, Baker fourth, and Telfer fifth. The grand sweepstakes of the show was found among the shearing wethers—Beattie's number, well named "Champion." He is a tidy, thick, firm sheep of superior Southdown merit. Next him came Gibson's number—as fine a sheep as the show contained, but could stand a little more bulk. He may be called a big-little sheep. The third went to Douglas and fourth to Baker. Wether lambs comprised seven entries. Simenton reached the top again on a real beauty, followed by Baker and Telfer. The awards for three wether lambs went respectively to Simenton, Telfer, Douglas, and Baker; and for three ewe lambs, Simenton, Jackson, Douglas, and Baker. The Southdown special for a pen of four lambs, two rams and two ewes, was won by Jackson & Son. Judges—Wm. Martin, Binbrook, and Henry Arkell, Teeswater.

**Dorset Horns** were chiefly exhibited by R. H. Harding Thorndale; W. E. Wright, Ganworth, showing two, and John Rutheford & Son, Roseville, one. Harding's entries were of the same high quality and in their usual fit condition. With the exception of a second prize by Wright and fourth by Rutheford, Harding captured all the money offered for the breed. Judges—Mortimer Levering and Henry Arkell.

**Hampshires** and **Suffolks** together were only few in number. The former were chiefly shown by John Kelly, Shakespeare, and the latter by W. J. Rudd, Eden Mills; while Rutheford, W. H. Beattie, and R. Gibson had each a single entry in Hampshire shearing wethers, winning in the order named. In shearing ewes, Kelly won first and second, and Rudd third. In ewe lambs, the Hampshires again led, while in wether lambs Rudd won first, second and third awards. Judges—Same as for Dorsets.

**Grades and Crosses** had a large entry, which contained some of the finest mutton sheep of the show. A large number of the exhibitors of pure-breds competed with grades of their respective breeds. This gave the classes a mixed appearance and the judges a difficult task. In shearing ewes the Downs led, as John Campbell's strong, blocky, fine handling entries won first and second. These were followed by Cotswold grades, shown by Parks, of Oriel. In wether shearings, Hanmer led on a monster dark face, Rutherford coming second on a number of similar breeding. In three wethers and in single wethers under one year, long-wools scored well to the top. In the former Orr & Lilloco won first on Leicester grades, Oliver second on Lincoln grades, and Kelly third on a Leicester grade, while Campbell won fourth, and Gibson fifth. In singles, Oliver won first and third, Orr & Lilloco second and fourth, and Kelly fifth—all long-wooled grades. Ewe lambs presented the largest class in the show—eighteen entries of various shades and types. Here the awards were well divided, Rutherford's grade Shrop. winning first, Gibson & Walker second, Orr & Lilloco third, and John Campbell fourth, while W. H. Beattie was placed fifth on a tight-wooled, highly-graded Shropshire ewe. Judges—J. G. Snell and Henry Arkell.

**Sweepstakes.**—The successful sheep has already been referred to as Mr. W. H. Beattie's shearing Southdown wether. There were no less than ten first prize animals pulled out for



CEDAR TREE 60 FEET IN CIRCUMFERENCE; STANLEY PARK, VANCOUVER, B. C.

Three trios of ewe lambs competed. Orr & Lilloco won first, Rennie second, and Whitelaw Bros. third. Judges—Jos. Gaunt and J. G. Snell.

**Oxfords** were better represented than ever before at the Provincial Fat Stock Show. The exhibitors were Messrs. E. Turner, Burford; Smith Evans, Gourcock; J. H. Jull, Mt. Vernon; W. H. Beattie, Wilton Grove; W. E. Wright, Glanworth, and John Rutherford & Son, Roseville. The nine shearing ewes competing gave the judges no light task, and when finished each of the three exhibitors had a prize of money value. Evans won first on a model ewe, firm and thick; while Turner, Jull, and Turner followed in the order named, with sheep varying little in excellence. Evans won a big victory in ewe lambs, securing first, second, and third, followed by Jull both in single entries and three ewe lambs. Evans showed two trios of very uniform character. Yearling wethers were four strong, and shown by Beattie, Jull, and Rutherford. The first went to Beattie's second Chicago winner, a very handsome fellow, as fine as a strong Oxford. Jull stood second and third on sheep of much more open pattern. A notable sweep was made by Wright, who won first, second and third on wether lambs, also winning the trio award on them. His opponents in singles were Rutherford and Jull, with lambs of no mean stamp. Their backbones, however, were not as well covered. Judges—Henry Arkell, Teeswater, and Mortimer Levering, Lafayette, Ind.

**Shropshires** never before turned out so numerous, nor in better fit. The exhibitors were D. G. Hanmer & Sons, Mount Vernon; John Campbell, Woodville; W. E. Wright, Ganworth; W. H. Beattie, Wilton Grove; and R. Gibson, Delaware. Messrs. Hanmer were out particularly strong, and won most of the plums in females. Campbell had the gem of the four shearing ewes in a very choice number, well covered, as fine as a Shropshire should be, and quite ripe. Hanmer's three entries won next in order. They were all prime in character, fit and finish. No less than twelve ewe lambs gave the judges, as will be understood, a trying ordeal. Messrs. Hanmer supplied seven of the number—as uniform a lot as one would wish to see. They



this contest, including the following breeds: Lincoln, Leicester, Shropshire, Shropshire grade, Cotswold, and Southdown, half of either sex, a d of lambs and shearlings. It seemed as if each animal had been brought almost to the maximum of perfection in its own way. The judges consisted of the six men (three long-wooled breeders and three short-wooled) who had placed the awards in the different classes. In this case they could not be blamed for splitting, which, indeed, they did conscientiously, not particularly on two sheep, but on the two decided classes of breeds. Had the long-wooled admirers had their way, the Leicester would have likely won; whereas the dark-face breeders would probably have decided on a Shrop. The split, however, being an even one, a seventh man was called in the person of Mr. Bollert, of Vermont, who followed the decision of last year in proclaiming the shearing Southdown wether champion over all breeds and ages.

THE DAIRY TEST.

Since the introduction of the dairy department as a feature of the Ontario Provincial Winter Show two years ago, the entries have practically doubled each year over the former. The class this year contained a good representation of the various breeds recognized in Canada as belonging to the milking classes. The test was conducted by Mr. Joseph Palmer, of the Kensington Dairy, Toronto, assisted by Mr. Wilson, of the O. A. C., Guelph. Prof. G. E. Day, Guelph; R. G. Murphy, Elgin; and J. C. Snell, Snelgrove, officiated in judging the conformation of the animals. Below is a table showing the names of the competing cows, their breed, owner, the pounds of milk in two days, per cent. of fat and total score. The scores were arrived at from the relative standing of the cows judged from the following scale: Constitution and conformation, 20 points; 1 point for each pound of milk, 20 points for each pound of fat, 4 points for each pound of solids not fat; one point for each 10 days in milk, after the first 20 days (limit 200 days), and 10 points deducted from the score for each per cent. of fat below 3 per cent. of fat in the milk. The following is the record and standing of each prize-winning cow. The cows marked 3 years are 3 years or over, while those marked 2 years are less than 3 years.

Table with columns: Prizes, Name of cow, Breed, Owner, Address, Pounds of Milk in 2 days, Per Cent. Butter-fat, Total Score. Lists various dairy cows and their performance metrics.

Awards.—Best dairy cow, any age, breed or grade—Calamity Jane, Holstein-Friesian, owned by A. & G. Rice, Currie's, Ont., for which she received the Prince of Wales prize of \$18; from the Canadian Holstein-Friesian Association, \$25; and from the American Holstein-Friesian Association, \$25. This is the third time Calamity Jane has led in the Provincial Winter Dairy Show. The second award of third, by Aaltje Posch 4th, same owner. The second award of third, by Fanny F., owned by Jas. Rettie, Norwich; and the third, by Aaltje Posch 4th, same owner. The second award of third, by E. Gley Frens, owned by A. & G. Rice. The sweepstakes of \$30 for cows under 36 months was won by Queen DeKol 2nd, Holstein, owned by G. W. Clemons, St. George. The second score was made by Fancy of Oakdale, Jersey, owned by J. H. Smith & Son, Highfield, Ont., and the third, by Fanny F., Holstein-Friesian, owned by James Rettie, Norwich, Ont.

SWINE.

There were 225 entries in the nine classes of hogs for which prizes were hung up, and twenty-one exhibitors, most of whom were competitors in more than one class, contended for the honors. A large percentage of the animals were fashioned after the type of the bacon hog demanded by the market, and there were a considerable number of high-class specimens, but candor compels us to say there is yet room for improvement in several of the classes, and breeders need to pay more attention to breeding to the required type, if we are to have a uniform quality to put upon the market. The short, thick, fat-backed hog is not wanted, and the sooner we get away from it the better for all.

Berkshires were shown by J. G. Snell, Snelgrove; Geo. Green, Fairview; and T. A. Cox, Brantford, and many excellent ones were forward, most of them, indeed, being of the lengthy, strong-boned, firm-fleshed sort. Mr. Snell was especially strong in the classes for barrows, winning first, second and third prizes in the sections for hogs nine months and under fifteen months, and also for those six months and under nine months with typical bacon hogs showing strong breed character. Mr. Cox had the reserve number in the latter section. In the competition for sows over nine and under fifteen months Snell again won first honors with his Snell's Charmer, an uncommonly good one, carrying great weight for age on strong, straight legs, and having great length of sides, smooth shoulders, long and deep hams, and thick, fleshy belly. She was from the first considered a strong claimant for the championship as best of any breed in the show, and was in the final contest awarded that high honor in very strong competition. Green's Cora Belle made an excellent second, and he had also the third prize sow in the class. Mr. Green's Victor Lady, winner of first premium as under six months at the Toronto, London, and Ottawa shows was here, also a clear winner in strong company as under nine months. She is a wonderful sow for her age, being straight and smooth, standing on strong timber, and having deep sides, full hams, and fine shoulders. Snell's Highclere 12th, of much the same type and a very strong number, was placed second, and Green's Countess, third. The Snelgrove entries, Jewel and Primrose, were respectively first and second in the section under six months, and Mr. Cox had a good entry, which fell into third place. For the best three pigs, the offspring of one sow, the Fairview entry was chosen for pride of place, and the Snelgrove groups came into line for second and third. They were all exceptionally good lots. For the best three bacon pigs of this breed, Mr. Green was again first and also third, Mr. Snell winning second prize with pigs of similar type, but a little two heavy for the purpose, the judges said.

Yorkshires were entered by J. E. Brethour, Burford; Jos. Featherstone, Streetsville; Henry Daddles, Kossuth, and A. Frank & Son, The Grange. The first-named exhibitor was especially strong in this class, having a number of typical animals well brought out. In barrows under fifteen months, Mr. Brethour's Patron was a sure winner, and Mr. Featherstone had a good one for second place in Jumbo, the third going to the Burford herd. Brethour's O. L. Charles was the winner in the section under nine months, followed by Mr. Daddles' entry—a right good one. The Burford offering, Victoria, was by consent the victor in the ring for sows under fifteen months. She has fine quality, great length and depth of sides, and strong, straight and well-placed underpinning. The same herd had the second prize sow in Victoria II., of similar character, and Featherstone's Jessie made a capital third. For sow under nine months Mr. Daddles had a strong winner in Mary Ann, a high-class entry in all that goes to make up an ideal bacon pig. Brethour's Clara 7th, a close competitor, got into second place, followed by Frank's Guelph Beauty for third, and a very creditable one, too. In the class under six months Daddles came to the front again, followed by Brethour for second and third. For three pigs, product of one sow, Brethour captured first award with a very fine group, and second with a trio of very much the same type. Daddles was third. For the best three bacon pigs of the breed Brethour won first, Daddles second, and Featherstone third.

Chester Whites were well represented by selections from the herds of R. H. Harding, Thorndale; Wm. Butler & Son, Dereham Centre; Thos. George, Mount Elgin; D. DeCoursey, Bornholm; and Gideon Snyder, Elgin. There were some excellent specimens shown, while others were not up to the standard, and some looked odd for the classes in which they were entered, which may be an indication of early maturity. In the class for barrows under fifteen months George had first place, Harding second, and Butler third. In barrows under nine months Butler came first, with Harding second, and DeCoursey third. Butler was again first with sow under fifteen months. For sow under nine months, Harding had a good one for first place, and DeCoursey a close second, Butler winning third. DeCoursey got to the front with a sow under six months, Snyder winning second, and Butler third. For the best three offspring of one sow DeCoursey was given first money, and Snyder second. For the best three bacon pigs of this breed Butler won first prize, Harding second and third.

Poland-Chinas made a strong showing, the exhibitors being W. M. & J. C. Smith, Fairfield Plains, and W. & H. Jones, Mt. Elgin. Jones won first in both sections for barrows, and Smith second; and in the female sections Smith was first and Jones second; while for the offspring of one sow Jones led, as also for the best three bacon pigs in the class. Smith coming second.

Suffolks and Essex were classed together, and entries were made by Jos. Featherstone, Streetsville, and A. Frank & Son, The Grange. The former had the first prize winners in the sections for barrows under fifteen months, sow under fifteen months, sow under nine months, sow under six months, three pigs (produce of one sow), and three best bacon pigs in the class (Frank had first prize sow under nine months, and second for the produce of a sow).

Tamworths were exhibited by Thomas George, Mt. Elgin; Andrew Elliot, Galt; and N. M. Blain, St. George. George won first in the sections for barrows under fifteen and under nine months, for sow under fifteen months, sow under six

months, the produce of a sow, and for three bacon pigs. Elliot was placed first for sow under nine months, and second for barrow under nine months, for sow under nine months, and for produce of sow.

Duroc-Jerseys were shown by Wm. Butler & Son, Dereham Centre; Tape Bros., Ridgetown; and John Park & Son, Burgessville. Butler was placed first for barrows in the section under nine months, and first for sows in the sections under fifteen and under nine months. Tape Bros. won first for barrow under fifteen months, for sow under six months, and for offspring of sow, and four second prizes. Park & Son were first for three bacon pigs of this breed.

Grades and Crosses.—W. M. Smith had the only entry for barrow under fifteen months with a Berkshire grade. E. & N. Parks, Oriol, had the first prize sow under fifteen months, and W. H. Jones, second. In sows under nine months, Tape Bros. won first with a Duroc grade, and J. G. Snell, second. For the best animal in the swine department J. G. Snell won the sweepstakes with a pure-bred Berkshire sow.

Bacon Pigs.—The special prizes given by the pork-packers, and awarded by packers as judges, for the best six lean singers, the first prize was given to O. J. Benedict, Mt. Vernon, for Tamworths, and second to Thomas A. Good, Brantford, for Tamworth and Berkshire grades.

For the best five ideal singers suitable for the export trade the first prize went to J. E. Brethour, Burford, for Yorkshires; second to Wm. Butler & Son, for Duroc-Jerseys.

The Canadian Smithfield.

There has for some time been misgivings in the minds of some whether the Guelph Christmas Fat Stock and Poultry Show would this year prove a success, since the Ontario Provincial was being held at Brantford on clashing dates. Since the event transpired, on December 9th and 10th, all doubts have cleared away, and so far as the cattle department was concerned, even the Guelph Board were surprised at the number and excellence of the exhibits, much to the credit of John McCorkindale, the efficient secretary, and an able board of directors. The cattle entries numbered some half a hundred, but some of them were for pairs, which brought the number up to about 60 head, while the general average quality was quite up to the Brantford entries; in fact, the two full rows tied in their usual places along the north side of the Victoria Rink appeared much the same as in former years, with less animals in low or fair condition. The prizes offered were not large, but the "Queen's Jubilee" sweepstakes of a purse of twelve sovereigns for best fat animal on the ground, together with Guelph's record as a place to make successful sales of Christmas beef, seemed to call together many of the best fat animals in Western Ontario. The envied trophy referred to led at least two exhibitors to divide their herds between Brantford and Guelph, sending their best to the latter place. We refer to Messrs. Oke, of Alvington, and Fried, of Roseville. Mr. Fried had succeeded with a handsome red grade two-year-old in chasing the Brantford sweepstakes to a close contest, and it was his superior half-sister, Oxford Rose, that bore away the golden prize at Guelph. She is full, round, level, and packed with mellow but firm meat. She is quite ripe, free from patchiness, and stands straight and strong. Her weight the day she was sold to Mr. Maybee for Halifax for seven cents per pound was 1,775 pounds. She was bred by her exhibitor, and sired by Hopewell, a son of Indian Chief. Her rival was Messrs. Oke's grade two-year-old Shorthorn steer that won 2nd at the last Toronto and 1st at London exhibitions; in the latter instance beating the Brantford sweepstakes winner. He weighs 1,880 pounds, and was also sold for seven cents per pound. It was with some difficulty that the Guelph award was decided upon, as the animals were of quite different pattern. While the heifer's fore end, crops and back were all that could be desired, she lacked just a little in sirloin and hind quarters, in which points the steer excelled. He was however, a bit lighter in front and somewhat more paunchy. In this competition was Capt. T. E. Robson's (Hiderton) Shorthorn cow, a beautiful animal that handled firm and won 1st. for Shorthorn female over three years old. She is a model animal, girthing over 8 ft., and weighing over 2,000 lbs. Among other successful exhibitors were: J. Brown, Galt; Wm. Russell, Exeter; Matthew Wilson, Fergus, and a large number of local men, with Shorthorns and Shorthorn grades; while Alfred Stone, Guelph, and Caleb Rawlings, Ravenswood, and a few local men showed capital and well-fitted Herefords. A few nice Devons were also in evidence from the well-known herd of W. J. Rudd, Eden Mills.

The Sheep Exhibit was no better than it should have been; in fact, the number of well-brought out animals was smaller than we expected to see. The entire entries made were 60, and a number of these were absent. In long-wools, John Rutherford, Roseville, won most of the awards, as well as a number of local men, with Shorthorns and Shorthorn grades. A. J. Watson, Castlederg, showed a number of good Cotswold ewes, winning some good awards. J. Brown, Galt; G. & W. Parkinson and G. & R. Laird, Guelph, were also successful competitors in the long-wooled class. In Downs, Herbert Wright, Guelph, figured conspicuously with his Oxfords, as did also T. C. Douglas, Galt, with Southdowns. A. Rudell and R. Moody, Guelph, also scored in the Down class. With a few additions, the above exhibitors won the grade sheep awards.

Swine had in all 45 entries. The wonder of the show was a pig said to be the largest in the world. We agree he was large enough, as he weighed 950 pounds. He was of decided Yorkshire pattern. His breeder was J. A. Atchison, Fossyby. Pure-bred hogs were very few in number, there being but two exhibitors in the two classes shown: John Kitching, Nasagaweya, and R. J. & A. Laurie, Wolverton. The grade classes were well filled, however, with entries of high quality. The Tamworth cross was particularly conspicuous.

The Poultry Exhibit was very large and of fine quality, there being some 400 entries of high-class birds. The useful breeds were most numerous, which is a hopeful sign for the poultry trade of Ontario. Leghorns and Plymouth Rocks were among the most numerous shown. The awards were made by Thos. A. Duff, Toronto, and L. G. Jarvis, O. A. C., Guelph.

For Entertainments.

By way of variety, and to afford something of special interest to all, we give an interesting poem on "The Farmer's Jubilee," by Mr. Robt. Elliott, and another in lighter vein by Mr. J. W. Bengough, of Toronto, Canada's greatest humorist and cartoonist, which, with several selections in the Home Department, will be found admirable for public school and other winter entertainments. We trust they will be made of very general use.



**The Case of Royal Standard.**

Readers of the FARMER'S ADVOCATE are aware from our report of the Chicago Horse Show that Graham Bros.' Hackney stallion, Royal Standard, won the championship over all light breeds, squarely beating in the ring horses heretofore invincible in the United States, England, and France. The show was under the dual management of the Illinois State Board of Agriculture and the Chicago Bit and Spur Club, Mr. John A. Logan managing the horse show. Friction resulted, and whether the show was a financial success or not, it is difficult to say from the conflicting statements since published. Doubtless through the inspiration of parties smarting under defeat, the State Board undertook to refuse payment of the moneys and trophies won by Royal Standard, on the ground that he was not registered in the American Hackney Stud Book, nor eligible therefor, though he is regularly recorded (No. 3918) in the English Hackney Stud Book, being by Excelsior, N. 198, out of the inspected mare, Royal Lady 379. Some American papers and a few ill-informed Canadian "dailies" were misled into the publication of sensational and lying reports, describing Royal Standard as a "ringer." General Manager Logan now authorizes the statement that the entry of the horse was accepted by himself, with full knowledge as to his breeding and under No. 5 in the "General Rules" of the Chicago Show, which reads as follows:

"All stallions and mares entered in the classes for Thoroughbred, Trotters, Hackneys, coaching and draft horses must have been registered in their respective stud books and their pedigrees must be given on the certificate of entry."

All of the above was regularly complied with in the case of Royal Standard, so that no possible blame could attach to Graham Bros. in the matter; in fact, we understand that a representative of the show came to Canada to secure this and other entries from Canadian horsemen. Owing to an error in making up the prize list by using headings clipped from a New York show list the requirement of entry in the American Stud Book crept in, but was corrected in the official catalogue by the substitution of the conditions in rule 5. Under this lame pretext, however, the State Board now seek to avoid paying the premiums, and, as a matter of fact, owing to the conflict between the State Board and the horse show managers, for which the former appears to be largely responsible, all the Canadian prize-winners are being so far kept out of their just winnings, amounting to thousands of dollars. Our American friends cannot afford to let the curtain fall upon the splendidly successful show, held recently in Chicago, in such an ignominious way to their everlasting discredit and damage.

**Calgary, N. W. T., Creamery and Cold Storage**

The above creamery began operations on June 10th, 1897, and closed on October 30th. The quantities of butter made each month were:

June	1,407 lbs.
July	3,775 "
August	4,067 "
September	3,367 "
October	1,436 "
<b>Total</b>	<b>14,052</b>

Shipped to Great Britain, 4,698.

Sold in Alberta and British Columbia, 9,354.

The patrons are all well pleased with the season's work, and are looking forward to a make of over 3,000 pounds weekly next year. The quantities of butter handled at the cold storage department from Government creameries are, from:

Yorkton, Assiniboia	10,136 lbs.
Moosomin	7,582 "
Whitewood	21,171 "
Grenfell	18,642 "
Qu'Appelle	4,480 "
Regina	3,160 "
Maple Creek	6,324 "
Calgary, Alberta	14,053 "
Innifall	8,016 "
Red Deer	12,444 "
Wetaskiwin	7,194 "
Edmonton	7,870 "
<b>Total</b>	<b>121,102</b>

In addition to this we stored a quantity of butter for private creameries, dealers and farmers. We also handled some eggs, which kept in first-class condition.

JNO. T. McDONALD,

Manager Creamery and Cold Storage.

**Improved Stock Not Properly Appreciated.**

To the Editor FARMER'S ADVOCATE:

SIR,—In my judgment Nova Scotia is shortest in beef breeds. There has been considerable attention paid for several years to the dairy breeds, especially in the milk-producing centers, but not nearly the number of beef cattle are fed that might be or that were at one time. Taking the county of Cumberland, in Nova Scotia, and the adjoining counties in New Brunswick, with their thousands of acres of the best of dyke lands, you could not in a day's travel pick up a car lot of steers fit for export. The farmers export hay instead of beef. These counties, as well as the western part of Nova Scotia, are well capable of sustaining large herds of cattle. The eastward of our Province is, perhaps, better adapted to sheep-raising, although parts of it are fine grazing lands for anything. The great scarcity in our locality is not pure bred stock, however, but farmers who will go to the little extra expense of using the pure-bred sires and the best ones obtainable. When farmers will drive their cows past imported bulls and go twice the distance to a scrub, for the sake of saving fifty cents, it is not so much more stock as more education that is needed.

Colchester Co., N. S.

C. A. ARCHIBALD.

**The Stocker Trade and Freight Rates on Lumber.**

Manitoba is essentially a wheat-growing country. Wheat is and will for years to come be the staple product of the Province. Where the best of the land can be bought at from \$5 00 to \$10 00 per acre, and where by the use of modern prairie farm machinery, with comparatively little effort a man with a half-section (320 acres) can cultivate 300 acres and have 200 in wheat each year, producing, at present prices (75 cents), from \$1,500 to \$3,000 hard cash, there is a very decided disinclination among the majority of farmers to embark extensively in stock raising, which demands closer and more continuous application throughout the twelve months of every year. And yet those of us who have lived in this country for the past 10 or 20 years know too well that wheat has not always been a paying crop, so many things may intervene to reduce profits or wipe them out altogether. Were it necessary, whole columns of evidence could be adduced to prove that the districts where mixed farming has been carried on, where live stock raising in one or more branches has been followed, have made far greater and more permanent progress than those devoted exclusively to wheat farming. And one can safely prophesy that by the time another decade has rolled by the mixed-farming districts will show to still more marked advantage in the superior condition and fertility of soil, caused by the application of manure, which the all-wheat district does not produce or cannot find time to apply. The more thought one gives to the question of keeping up the wonderful fertility of our soil and improving its mechanical condition after it has been under cultivation some years and had the humus or vegetable fiber all worked out of it, the more important does the problem appear. In probably every other agricultural country in the world the same process has gone on as it is now going on here, viz., the continual cropping of the land without manuring until absolute poverty of soil forced the farmer into better methods.

The claim is frequently urged, and rightly so, that the farmers of this greater Canada of ours are a better educated and more intellectual class than the average of any other agricultural country; and yet, owing to a number of reasons, some of which were cited in a recent issue, the farmers of Manitoba have allowed during the season just closed about 17,000 head of young store cattle to be shipped out of the country to make profit and manure for farmers living in the corn-growing States of the Union. These cattle are valued at about \$13.25 each, or a total of over \$220,000. The exact number of these cattle sent across the line we have ascertained from the district veterinarians to be as follows: Inspected by J. Dunn, V. S., Deloraine, 3,836 head; by P. A. Robinson, V. S., Emerson, 2,108; by M. Young, V. S., at Killarney, 125; and by Chas. Little, V. S., at Winnipeg, 10,573 head. There is another point worthy of consideration in this connection. Of course the 6,000 head of cattle inspected at the boundary ports were mostly driven out on foot, but all those inspected at the Winnipeg yards were shipped out by rail, about 5,000 going over the Northern Pacific and the other 5,000 going over the Canadian Pacific to the boundary line, just 60 miles, then to be handed over to the American roads; whereas, had these cattle remained in this country and been finished here for shipment to Eastern and English markets, the C. P. R. would have had a 1,400-mile haul on them, besides the additional number of cars required to carry full-finished export steers over three-year-old and two-year-old stores. About 35 head of these stores go into a car, while only about 17 head of export cattle can be put in. One of the greatest hindrances to the increase of stock-raising and feeding on the part of the general farmer is the cost of building material. We believe the railroad companies give reduced freight rates on the material required to build grain elevators (besides the exclusive privileges enjoyed by them). Would it not pay the railroad companies to give a reduced rate to the farmer or stockman on the material required to build stock barns? There can be no disputing the fact that if the farmer had good big barns with storage capacity for hay, straw and chaff, and reasonable facilities for winter-feeding stock, there would not be the enormous waste that now occurs every fall in the burning of thousands upon thousands of tons of straw simply to get it out of the way. Cheaper lumber would encourage the building of more and better barns, which would result in the breeding and feeding of more and better cattle, and give the Canadian Pacific Railway an increased number of cattle to haul over their 1,400 miles to Montreal.

**Three Great Pictures.**

In distributing the balance of our three great premium engravings, "Canada's Pride," "Canada's Glory," and "Canada's Columbian Victors," we desire that they find their way at once to as wide a circle of farm homes as possible, hence our exceedingly liberal offer of all three for one new subscriber, or 50 cents cash. We would advise our friends to take advantage of this offer at once while the supply lasts. For the information of our many new subscribers, we might say that the first two pictures represent groups of prize-winning heavy and light horses, respectively, and "Canada's Columbian Victors" is a beautiful illustration of prize-winning Ayrshires at World's Fair in 1893.

**Dairy Industry of Manitoba for 1897.**

BY C. C. MACDONALD, DAIRY SUPERINTENDENT.

The season of 1897 has superseded all others in the dairy history of Manitoba. There has been a rapid progress in every detail of the industry. The season for butter and cheese making opened up fully one month earlier than the seasons of 1896 or '95. The pasturage was all that could be desired at the time the milch cows were turned out of the stables for business for the season. The output of creamery butter has been very much increased, while the cheese output has just about held its own with the output of other years. The cheese department of the dairy industry of Manitoba got a heavy setback during the seasons of 1895-6, owing to the low prices that were paid. The market price of cheese was correspondingly lower in all the other provinces of Canada. So Manitoba was not alone in that. The farmers of the other provinces stuck to their business of producing cheese through the time of low prices, and were consequently in the business when the good prices came, and got the benefit of it. In this respect the Manitobafarmers, especially in the English-speaking districts, are subject to criticism, in that they have not as yet learned to stick to the business steadily. When the price of cheese is up, they go into the production of it; and as soon as the price is low, they drop out, regardless of the cost of getting out. There are three or four factories in consequence that are monuments of a lack of good dairy business thought. This is the reason that the cheese output of this year has not increased. The production where cheese has been manufactured has been larger than in any other years, except in one or two instances. The market price of cheese this year has averaged 8½ cents per pound at the factories. The prices paid at the creameries for butter has been steadier and higher during this season than in past seasons; the increase in prices has been nearly 2c. on an average higher. The average price paid at the creameries for the season of 1897 is 18c. per pound. From very carefully compiled figures taken from creamery statements, which are correct, the output of creamery butter for the season 1897 is 987,179 lbs., which sold at an average price of 18c. per pound, making a total of \$177,692.22, being an increase of \$50,482.22 for creamery butter over last year; while the output of cheese from the same source of information proves to be 987,007 lbs., which sold at an average price of 8½ cents per pound, making a total of \$83,895.59. Making a grand total from both creameries and cheese factories of \$261,587.81. These figures show an increased value of the output for '97 of \$69,965.41 over the season of '96.

The whole output of both creamery butter and cheese was shipped to British Columbia by the leading produce firms of Winnipeg, with the exception of one or two small lots which were shipped to Montreal, and two carloads which were shipped by one manufacturer direct to England. This will give some idea of the rapid development and growth of the mining districts of British Columbia, the mining sections having taken the bulk of the butter from the Province. That the demand is increasing in that Province is still further shown by the fact that, as reported, all the creamery output from the Dominion Government creameries in the Northwest Territories was also shipped to the British Columbia markets. The quality of the Manitoba article has proved to be prime in all cases, and has found a ready market all the year. The year has been an excellent one, and the farmers of the Province have every reason to be satisfied with the outcome. Dairying in Manitoba is now one of the staple industries. The secretary of each creamery and cheese factory has reported milk production increasing.

The creameries of Manitoba are mostly managed on the co-operation plan, being under the direct control of the farmers themselves, who appoint a board of executors each year. Wherever the farmers have been approached individually as to the result of the year's dairy work, in every case they have expressed themselves as being "well satisfied." This increase in the output this year only goes to prove what a desirable country for dairy or mixed farming Manitoba really is; and if the industry keeps pace for the next few years with what it has done in the past three years, Manitoba will be equal to any other province in the dairy world.

There were twenty-seven creameries and forty-seven cheese factories in operation this year. To show the growth of the industry during the past three years, the following figures will give a correct idea: In 1894 there were five creameries and seventeen cheese factories in operation. The value of the output was then estimated to be \$34,000. In 1895 there were fourteen new creameries, making nineteen in all, and thirty-five new cheese factories, making fifty-two in all. The actual value of the output was then \$192,000. In 1896 there were five more new creameries established, making twenty-four in all, while some of the cheese factories closed, leaving forty-eight in operation. The value of the output was then \$200,622.40. In 1897 five additional creameries were established, making twenty-nine in all (two of the older established ones ceased operations for some unaccountable reason). The cheese factories remained about the same. The value of this season's output is as given above, which shows an enormous increase. It is very gratifying to know that the efforts of the Manitoba Government, coupled with those of the farmers of the Province, have been crowned with success.



**Oxford County Fat Stock Show.**

The thirteenth annual Christmas Fat Stock Show of Oxford Co., Ont., occurred in Ingersoll on Dec. 16th. Being held, as it was, on a date free of other similar events, and within a reasonable radius of the homes of many of the exhibitors who contributed so largely to the Provincial Fat Stock Show, both the number of entries and the quality of the exhibits were beyond the expectation of the club. In cattle there were thirty-five entries, which include some of the best fat animals in the Province. Messrs. J. Fried & Sons, Roseville, Ont., had out a string of Shorthorns, including the reserve champion at the Provincial Show. He was the steer champion as well as the grand sweepstakes winner of the show. Their remaining entries were also of high merit, and won for best yearling steer, best cow, best two-year-old heifer, and best yearling heifer. Brown & Rutherford, Roseville, were also strong competitors. The female sweepstakes came their way on a very sweet, evenly-fleshed, well-ripened white two-year-old heifer. Their Aberdeen-Angus two-year-old steer also commanded considerable admiration. Wm. Donaldson had out a noble Shorthorn heifer, with which he had some hopes of winning for the second time the challenge silver pitcher, but her competitors were too strong. A number of the animals were in nice shipping condition, while a few others will stand longer feeding.

The sheep show of 86 entries was of a very high order, very much ahead of that seen at Guelph last week, and, indeed, approaching in quality the average of the Provincial turnout. Among the successful exhibitors of long-wools were Wm. Donaldson, Brown & Rutherford, John Park & Son, George Allin, and W. E. Wright, most of which were successful at the Provincial show. Cotswolds secured the greatest number of awards. In medium-wools, Oxfords, Shropshires and Southdowns contested, the exhibitors being Brown & Rutherford, W. H. Beattie, W. E. Wright, J. H. Jull, E. E. Turner, most of which had forward their Brantford entries. The Brantford sweepstakes wether repeated his victory. It takes a good one to get away from a high-class, well-fitted Southdown in a mutton contest. The best lamb was found in J. Park & Son's Cotswold female, and best four wether lambs in W. H. Beattie's entry, consisting of three Shrops, and one Shrop, grade.

The swine entry was just half that of the sheep. In the class for pure-breds, and also for cross-breds, bacon pigs were called for. Both Yorkshires and Tamworths gave a good account of themselves. J. E. Brethour scored well, winning a first some nine prizes. The best bacon sow on the ground was found in his herd, the best pair of bacon barrows or sows, and also the second best pen of six singers, the last entry being from a Yorkshire sow and Berkshire boar. H. Goldie Thamesford, made a good record with his pure-bred Tamworths, winning first for pen of six singers, and for best bacon barrow in the show. Amos Longfield, Crampton, was also a successful exhibitor of cross-breds containing Tamworth blood. The various bacon entries were pronounced by the judges as of a very high order.

**Manitoba Winter Care of Fowl for Eggs.**

It is too late to talk about the building, but see to it that there are no crevices that admit cold drafts to blow directly upon the fowl, especially when they are upon the roost. Be careful not to overcrowd, allow at least eight square feet of floor space per bird. Watch constantly for lice. Keep dust box clean and well supplied with dry earth, lime, and some ashes. A little flour of sulphur added occasionally will improve it. Never allow grit box to become empty; the same applies to box containing oyster shell. Apply coal oil occasionally to roosts and nest boxes. Cull the flock closely, discarding from laying pens all birds over two years old and undersized pullets. My experience in this country differs considerably from that of most poultrymen in the East. They claim the steady winter layers are the early hatched pullets. I prefer the yearling hens well fed during the summer, so as to be through the moult by early fall. I do not find them so sensitive to changes of weather. One other thing to watch for very closely is disease. On appearance of first symptom of any ailment separate affected bird, and if after a day or two isolation and treatment the symptoms have not disappeared the block and axe are by long odds the cheapest way out of the difficulty. My aim as a breeder has not been to reach a given standard of so-called beauty, but to get a flock to average 200 eggs each per year, 50 per cent. of them to be laid during winter months. I have not reached my goal, but am coming closer yearly.

Now for feed, I will simply state my daily bill of fare for last three years during winter months. In morning a mash composed of equal parts, by measure, of cooked vegetables—mangels, potatoes, cabbage, onions or turnips—bran and either oat or barley chop, sometimes one, sometimes the other, and sometimes a mixture of the two. This is mashed in the evening and fed as soon as possible after daylight. The quantity should not be sufficient to make a meal. I make up this deficiency by raw vegetables split and thrown about coops. For noon I feed meat or bone; not, however, a large quantity per hen. I do not give this every day, simply because I cannot get it, and supplement this with grain scattered amongst the litter on the floor; one day it will be oats, next perhaps barley, another wheat. About an hour before dark I clear a space on floor of pens and feed all the wheat the fowl will eat up. I prefer to see a little left over of this last meal of the day, as then I am satisfied that all have enough. The grain for the last feed on very cold nights I warm before feeding. This winter, wheat being so high in price, I had not the courage to back up my convictions, so substituted barley as my main whole grain feed. The results have not been satisfactory. I have also fed corn to some extent, but not enough to know how it affects

the egg yield. I should like to substitute steamed clover for vegetables, but owing to its price, \$1.75 per cwt. in Toronto and about as much more for freight, it is too expensive. As can easily be seen, my main object is variety of foods.

I supply fresh, clean water twice daily, and put every morning three or four teaspoonfuls of tincture of acetic acid in a pail of water as a preventive for colds. To-day (Nov. 15th) I enclosed all fowl in their pens and shall not let them outside again until spring unless weather becomes very warm for time of year. "W," Millbrook, Man.

**Canada's Mineral Resources.**

FROM NOVA SCOTIA TO THE KLONDYKE.

A throne of royal state, which far  
Outshone the wealth of Ormus and of Ind,  
Or where the gorgeous East with richest hand,  
Showers on her kings barbaric pearls and gold."

Since John Milton's day, the star of gold has shined from the Orient to the Occident. We have seen it hovering over California, Australia, South Africa,—to-day it glows above the Dominion. A limited population in an immense area of territory, the most populous parts of which are devoted to agriculture, mainly account for the past non-development of Canada's immense mineral wealth. But 1897 saw the inauguration of a new era, and 1898 will bring an inrush of gold-hunters such as this country has never before witnessed. The mineral products of Canada for 1897 are not yet available, but the following table shows the immense variety of Canada's mineral wealth, and the production of 1896, which the present year will far exceed, especially in the output of gold.

PRODUCTS.	VALUE 1896.
Asbestos.....	\$ 429,856
Baryta.....	715
Bricks.....	1,630,000
Building stone.....	1,000,000
Cement.....	201,505
Chromite.....	25,982
COAL.....	8,006,305
Coke.....	111,560
COPPER.....	1,021,148
Fireclay.....	1,427
Fragstone.....	6,710
GOLD.....	2,810,206
Granite.....	16,709
Graphite.....	9,455
Grindstones.....	32,810
Gypsum.....	174,403
Iron ore.....	184,313
Lead (price contained in ore).....	721,384
Lithographic stones.....	650,000
Limestone for flux.....	900
Manganese.....	905
Marble.....	60,000
Mercury.....	1,368
Mica.....	111,736
Felspar.....	276,301
Mineral water.....	1,155,000
Molding sand.....	10,925
Natural gas.....	1,155,646
NICKEL.....	3,990
Osmes.....	163,905
Petroleum.....	101,155
Phosphate.....	166,977
Platinum.....	120,000
Pyrites.....	153,875
Roofing cement.....	2,147,570
Salt.....	53,370
Sand and gravel (exports).....	1,230
Sewer pipes.....	110,855
SILVER.....	225,000
Slate.....	9,960
Soapstone.....	500,000
Terra cotta.....	23,627,305
Tiles.....	
Tripolite.....	
Estimated value of mineral products not returned.....	

Partly estimated total..... 23,627,305  
The developed coal areas of Canada cover 97,200 square miles: being in Nova Scotia, where in Cape Breton County a seam was discovered a few weeks ago that will double the area there; New Brunswick, the Northwest Territories, and British Columbia; the two latter, which specially require it, being richly supplied. The coal measures of Nova Scotia aggregate 7,000,000,000 tons. Quebec, Ontario, and British Columbia produce silver; the Thunder Bay, Ont., district having produced, all told, some \$1,300,000 worth. West Kootenay, B. C., in 1896 produced nearly \$2,000,000 worth. The same three provinces produce copper, but the metal is not refined in Canada, being exported to the U. S. as ore or matte. All the provinces contain more or less iron ore, but the chief mining and smelting is done in Nova Scotia and Quebec. In 1883 the first discovery of Canadian nickel was made in making a C. P. R. cutting near Sudbury, Algoma District, Ont. The output has been between 4,000,000 and 5,000,000 lbs. annually. The consumption of this fine metal is increasing, but Ontario has enough to supply the world for an unlimited period. Her only rival is the French penal colony of New Caledonia, which does not produce as much as Sudbury. Gold has been found in most of the provinces and territories, but only mined to a serious extent in Nova Scotia, British Columbia, and the Yukon. Nova Scotia has been quartz mining for 35 years, the whole cost of mining and milling being in some cases only \$1.65 per ton, and up to last year over \$12,000,000 worth in all had been produced. The Chaudiere, P. Q., gravel placers have yielded \$2,000,000 worth. Numerous rich gold finds have been made in Northwestern Ontario, and 1897 will show a great increase in production of the yellow metal for that Province. British Columbia has long been known as a gold-mining country; dating as far back as 1857, the bars of the Fraser and tributaries were worked, high-water mark being reached in 1863, when \$3,913,563 was reached, Cariboo yielding the bulk.

Then it declined till the great recent Southern B. C. discoveries revived the industry. Up to 1896 B. C. produced nearly \$60,000,000 worth of gold. But the Yukon River country in the north-western portions of the Canadian Northwest in 1897 has attained world-wide celebrity through the official report of Robert Ogilvie, F. R. G. S., Dominion surveyor, sustained by the almost fabulous successes of a few miners there during the past two seasons, who have returned to civilization with millions in nuggets and gold dust. The gold-bearing zone is some 400 miles long and 100 miles wide. On the Bonanza and Eldorado creeks there are 140 claims staked out that will yield \$70,000,000. The gold in sight from placers in one Klondyke district of 20 by 35 miles is put at over \$100,000,000. When placer mining (washing from the gravel) ceases quartz mining by stamping machinery will begin.

Now that Canadians and foreign capitalists have taken hold of mining in earnest, remarkable advances may be looked for which will indirectly stimulate lumbering, fisheries, manufacturing and general trade, and, to a considerable extent, agriculture and stock-raising, which will continue as heretofore to be the greatest source of Canadian wealth.

**Wheat is King in Manitoba.**

The following estimate of the products of the farm for the past year is furnished us by the Manitoba Department of Agriculture:

In considering the result of the year's labors, productions and profits with regard to agriculture in Manitoba, we must still give the greater part of our attention to the wheat crop. Although the Province as a whole is engaging in mixed farming, and our productions in pork, beef cattle, dairy products, and poultry make a creditable showing, yet all these combined only total up about one-fifth of the income derived by farmers this year from wheat alone. The cry therefore goes out and will continue to do so for many years to come, "Wheat is King!"

The following is a summary of the grain, live stock, and dairy products for the season:

Wheat, total product.....	18,261,950 bushels.
Oats.....	10,629,513 "
Barley.....	3,183,062 "
Flax.....	247,886 "
Potatoes.....	2,033,286 "
Roots.....	1,220,070 "
Rye.....	43,344 "
Peas.....	33,380 "
Butter (Creamery).....	987,179 pounds.
Home dairy.....	1,410,285 "
Beef cattle exported.....	15,000 head.
Beef stockers exported to U. S.....	16,500 "
Hogs exported.....	12,500 "
Hogs packed or used in Winnipeg.....	25,000 "
Poultry disposed of by farmers—	
Turkeys.....	47,540
Geese and ducks.....	20,000
Chickens.....	184,065

A rough estimate of the value of the above products to the farmers of Manitoba might be made as follows:

Wheat for export.....	15,000,000 bu. at 75c—\$11,250,000.00
Oats, sold by farmers but consumed in Province.....	1,000,000 bu. at 25c— 250,000.00
Flax.....	200,000 bu. at 60c— 120,000.00
Dairy products—	
Creamery butter 987,179 lbs. at 18c—\$177,692.22	
Dairy " 1,410,285 lbs. at 13c— 183,337.05	450,213.43
Cheese.....	987,007 lbs. at 8c— 78,960.56
Cattle (beef and stockers).....	1,000,000.00
Hogs, at \$8 each.....	300,000.00
Poultry.....	80,000.00
	\$13,450,213.43

**Milk Yield and Butter-fat.**

SIR,—Please accept my thanks for full answers to questions in last issue, but I cannot have worded question 2 clearly, as Prof. Dean's answer does not touch my difficulty. He says: "By increasing the volume of milk the weight of butter-fat is also increased, assuming that the percentage of fat remains the same, which it would be likely to do under normal conditions." But my point is: Irma gave us much butter when her yield was 40 lbs. of milk per day as she did when her milk yield was 70 lbs. per day. The first was under ordinary conditions, the second at a special test; i. e., the effect of the latter was to increase the milk yield 75 per cent., the butter yield not at all. My question was, is it usual for the treatment a cow is subjected to during a test to have this effect. "IGNORANT."

**Care of Horses' Teeth.**

A condition of horses' teeth which often has much to do with their thin, unthrifty condition is referred to in the English *Live Stock Journal* as follows: "When a horse does not appear to thrive as he should on his food, and the most careful observation fails to account for his condition, it is wise to have his teeth carefully examined, especially the back jaw teeth or molars. An irregularity of these is often the unsuspected source of the evil. The molars occasionally wear irregularly; sometimes the upper border overlapping the external surface of the lower, while the internal surface of the lower rises to a corresponding height within the mouth. In such cases sharp points are found where the wear has been slightest, and these roughnesses lacerate the inside face of the cheeks and cut the sides of the tongue, so that mastication is performed not only with difficulty but with pain. The consequence is that the food is not properly prepared for the stomach, and passes through it without assimilating to a full extent its nutritive principles. It must be acknowledged that proper attention to the animals' teeth is much neglected. Horses occasionally have bad teeth, but then they don't tell us of it."



## QUESTIONS AND ANSWERS.

## Veterinary.

## Probably Tuberculosis.

MR. MCKIM, Cumberland Co., N. S.—“I have two yearling heifers, both coughing (one not so bad as the other), which cough three or four short coughs every fifteen minutes. I noticed them as soon as they came home from pasture this fall. They have been fed on poor hay, straw and some turnips. Please reply in your next issue.”

[A dry, short, interrupted cough is at all times suspicious, especially in the morning, at feeding time or after exertion, but it may not mean tuberculosis. There may be a disturbance of respiration, the breathing being quickened by any slight excitement, and yet the animals continue to show fair condition. Many cases cannot be detected by outward symptoms. To make sure, you should have these animals subjected to the tuberculin test, providing there is a competent man in your district, as it is an operation requiring great care and skill. DR. WM. MOLE, V. S., Toronto.]

## Sloughing of the Hoof.

MR. ALEXANDER ROBB, Carleton Co., Ont.—“I have a horse lame and the old hoof is coming off, a new one growing in its place. Do you think that there are broken bones inside? He has been out at grass all the summer, and is very lame yet. Could you give me a cure for him?”

[Unless we have further particulars of this case we are unable to advise what is best to be done under the circumstances. If this condition arises from a festered corn, laminitis, quitted, gathered nail, or prick from shoeing, and the hoof has sloughed off as a consequence of the inflammation, we are doubtful if anything can be done for the animal, and it would be a merciful act of humanity to put the poor beast out of his sufferings; but before doing so, if a competent veterinary is convenient, have it examined. It takes a year at the very least to grow a new hoof, and more than likely you have a diseased bone present, which would render a cure impossible. DR. WM. MOLE.]

## Piles in Pigs.

READER, Compton Co., Que.—“Two or three of my pigs have been troubled with what is called piles. They seem all the time trying to press their insides out, and the bowel protrudes. As soon as this commences they stop gaining, and I cannot seem to help them any. Can you tell me the cause, and is there any cure?”

[The trouble may come either from excessive costiveness or scouring. If the pigs are constipated give opening food, such as bran, ground oats, and pulped roots, greasy swill, or, if necessary, give linseed oil, half pint to each hog. If diarrhoea is present, it is probably caused by indigestion, and a change of feed should be given. We would recommend giving ground barley, oats and bran dry in one trough, with swill or water in a separate trough, where the animals may drink when they need it. When food is given mixed with cold water in large quantities in cold weather, it is liable to cause indigestion. A mixture of salt, sulphur and ashes should be accessible at will. A weak solution of carbolic oil may be applied to the exposed bowel, say one drop of carbolic acid to twenty-five of linseed or sweet oil, not stronger, and the bowel returned with the oiled finger.]

## Miscellaneous.

## Commercial Fertilizers vs. Cotton-seed Meal, Etc.

J. W. DOHERTY, King's Co., N. B.—“I. In studying the different feeding values of articles in 'Stewart on Feeding Animals,' I notice ruta-bagas are valued at .15, turnips .14, and fodder beets .14. Please describe the difference between ruta-bagas and turnips, and also let me know if fodder beets and mangels are the same articles?”

“2. Commercial fertilizers cost here about \$33 per ton. They are said to contain ammonia, 3.75 to 4.25; phosphorus, *i. e.* acid (available), 10.00 to 12.00, and potash, 6.00 to 8.00 per cent. Cotton-seed meal can be procured for the same price per ton, and it is said to contain in each ton 62 lbs. of nitrogen, 2 lbs. of potash, and 29.5 lbs. of phosphoric acid, and the value thereof is \$30.74. Query.—Would it not pay the farmer better to purchase and feed cotton-seed meal and carefully save the manure than to buy the commercial fertilizers at the price mentioned?”

[1. Replying to your New Brunswick correspondent, I beg to state that “ruta-baga” is another name for what we call “swede turnip”; while the term “turnip,” as used by many English and American authorities, is another name for what we call “fall, or white turnip.” “Fodder beets,” as used in the quotation, evidently means mangels.

2. The question regarding commercial fertilizers and cotton-seed meal is not easy to answer, for there are many circumstances which affect the relative value of the two substances. In the first place, it is not stated whether the phosphoric acid of the fertilizer is in a soluble form or not, and the solubility of this substance very materially affects its value. Soluble phosphoric acid is frequently valued at 6c. per lb. and insoluble at 2c. per lb. Nitrogen also varies from 16½c. to 11c. per lb. according to solubility, and in some cases as low as 5c. per lb., as, for example, the nitrogen in hair, horn shavings, and coarse fish scrap. Potash usually is valued at from ¼c. to 5c. per lb. We must,

therefore, know more than the mere composition of a fertilizer before we can judge its value. It must also be borne in mind that the prices of these constituents vary more or less from year to year.

Where a guaranteed analysis is given, and two percentages are given, the lower percentage is regarded as the legal standard. Taking the lower percentages of the fertilizer in question, and applying the highest values quoted for the different constituents, we find the value of the fertilizer to be \$30.37 per ton. These values are taken merely as a basis of comparison. Now, with regard to cotton-seed meal, according to the Year Book of the U. S. Dept. of Agriculture, one ton contains, nitrogen, 135.8 lbs.; phosphoric acid, 57.6 lbs.; and potash, 17.4 lbs. (Your correspondent seems to be in error regarding the constituents of cotton-seed meal.) In valuing the constituents of fodders we must not attach so high a value as in the case of soluble fertilizers. According to the Year Book, nitrogen is valued at 12c., and phosphoric acid and potash at ¼c. each per lb. At these values a ton of cotton-seed meal would contain \$19.70 worth of fertilizers. (Supposing only three-quarters of these constituents were returned in manure (which is a fairly low estimate), the value of the fertilizers obtained would be \$14.77. Subtracting the fertilizing value from the cost of the cotton-seed meal, it would appear that a feeder of only ordinary skill should find it to his advantage to purchase cotton-seed meal and feed it to animals rather than purchase the fertilizer, since the value of cotton-seed meal for feeding milch cows or fattening cattle is clearly greater than the difference between \$30.74 and \$14.77 (\$15.93).

But is cotton-seed meal the only substitute for commercial fertilizers? In this part of Canada we can buy three tons of bran for the price of the ton of fertilizer in question. Three tons of bran contains 100.2 lbs. nitrogen, 173.4 lbs. phosphoric acid, and 98.6 lbs. potash. If we value these constituents as we did those of the cotton-seed meal, we find the fertilizing value of three tons of bran to be \$31.38. Allowing one-quarter for waste, we still have left \$23.54, a much better showing than for cotton-seed meal. Of course the price of bran varies with localities, and I do not know the price in New Brunswick.

Some may regard the valuations of the fertilizing constituents in the fodders as too high, but they are certainly not too high compared with the valuation of those in the fertilizer, and are used merely for comparison. It would therefore appear that the man who has his farm heavily stocked has very little use for commercial fertilizers, unless in very exceptional cases. G. E. DAY.

## Ontario Agricultural College.

NOTE.—To Professor Day's reply to question No. 2 it might be added that unless more than ordinary care be taken in the preservation and application of farmyard manure containing the cotton-seed meal, bran, or whatever it may be, much of the fertilizing elements may be lost; whereas there can be no loss from commercial fertilizer by fermentation, leaching, or loss of urine before application to the land.—ED. F. A.]

## Diseased Turkeys.

G. B. F., Swan Lake:—“Please tell me what ails my turkeys. Appetite good, appearance healthy up to time of death. Post mortem: very much emaciated, crop empty, gizzard appears to contain plenty of grit. Eat well up to night before death. Feed barley and house scraps, all they can eat. Quarters comfortably warm, not crowded, and exercise on fine days?”

[The above description will be recognized by most poultry-keepers as the symptoms of birds they lost. It is a common disease, a gradual wasting, no cure, good appetite till the last. In chickens it is generally a diseased liver, caused by either over-feeding, unhealthy quarters, foul water, or lack of grit. In this instance I think the warm quarters are the first cause. Turkeys require large, open, well-ventilated houses, and thrive best in very cold quarters. My birds are all kept in a large open loft where the thermometer shows little variation from outside. They fatten up in the most severe weather. Harris describes liver disease in turkeys as tuberculosis, which attacks liver and lungs, and other times intestines, caused by inbreeding or overfeeding; also, wasting or going light—in other words, consumption caused by being “stretched,” or breathing their own foul odors in a warm house. M. MAW, Winnipeg.]

## Silo Construction.

WM. PARK, Wellington Co., Ont.—“I intend building a silo, and would like to know if you or some of your subscribers could tell me if I could build it with brick to be satisfactory, and the best way to build it? By answering this question I would be much obliged. I have been a subscriber for the ADVOCATE for one year, and am well pleased with it.”

[A satisfactory silo can be built of brick, but in order to be strong enough to withstand the pressure, it would need to have very heavy walls, which would cost unnecessarily high. Mr. E. D. Tillson, of Tilsonburg, has brick silos to the capacity of 1,000 tons, but they are built in a brick barn, the walls of which are two feet thick, the silo walls being lined with a coat of cement plaster. There are two forms of silos that have grown into popularity within the last two years—one of cement concrete, and the other of single plank stood on end and hooped like a cistern. The former costs more

money, but when properly constructed will last indefinitely. These have been described time and again in the FARMER'S ADVOCATE, and just here we are led to ask why do people not file the numbers of this paper? We would refer Mr. Park to the issues of Feb. 15th, page 85; March 1st, page 105; April 15th, page 152; May 15th, page 224, of 1897. It will also pay him or any one else well to secure one of our new binders and a copy of Prof. Woll's book on silos and ensilage, as it is up-to-date, plain, practical, and cheap, containing hundreds of valuable points. It can be secured through this office, in paper, 50 cents, or for one new yearly subscriber at \$1.00; or \$1.00, in boards, or for two new yearly subscribers. On page 550 the conditions on which our new binder for the ADVOCATE can be obtained are stated.

## Barn Plan.

A NEW SUBSCRIBER, Niagara Falls, N. Y.—“I am about to build a barn; can any of your readers give me the benefit of their experience? I want a general purpose barn for a 100 acre farm, but I want an economical plan both as to labor and cost. Do you ever give plans in your journal?”

[In our issues of Feb. 15th, March 15th, April 1st, and May 1st, of 1897, and also in numerous issues of former years, are contained plans and descriptions of modern and economical farm barns. We are always ready to give place in our columns to plans and suggestions as asked by “New Subscriber.”]

## MARKETS.

## Toronto Markets.

The live stock trade in Toronto is assuming enormous proportions; the returns, although not made up for the entire year, show that it will top the record. In 1886 only 61,421 cattle entered the Toronto market; this year 107,638 have already been received, and taking the figures of the last three months of last year, the total for 1897 will reach 134,410, representing an average of \$12 per head, a value of \$6,645,220. The growth of the hog trade has been no less remarkable. Only 22,652 hogs entered Toronto market in 1886; last year the number had increased to 194,104. It may be estimated that 200,000 will be exceeded this year. At a valuation of \$9 per head, the amount will reach the very large figure of \$1,800,000. The number of sheep this year received is 57,989, or for the whole year, calculated by the returns for 1896, a total of 89,241 will be reached. Computing the price at \$4.50 per head, the cash value amounts to \$401,584. The statement of stock received at the cattle market from 1886 to 1896, inclusive, is as follows:

	CATTLE.	SHEEP.	HOGS.
1886	61,421	79,762	22,652
1887	70,075	58,849	34,932
1888	75,326	62,344	36,209
1889	93,523	92,346	56,570
1890	103,371	54,051	55,780
1891	106,904	49,525	50,757
1892	102,571	49,382	74,116
1893	86,719	49,883	74,567
1894	93,431	119,710	139,862
1895	99,233	125,732	154,394
1896	104,887	95,675	194,104
1897	134,410	89,241	200,000

The trade at the Western cattle market continues to show continual expansion. Up to last week 158,766 cattle passed through the market, as compared with 104,887 for all last year, and 194,318 hogs, as compared with 194,104 for all last year. Messrs. Davies & Co. are pushing their new building. They will put in a new gas singer and a mechanical scraper next week. This will almost double their capacity for the ensuing season. Farmers are becoming educated to the class of hogs required by the packers of this city.

The receipts this week at our markets were light, and trade was quiet. There is always a dull time a week or two previous to the Christmas trade.

**Export Cattle.**—Very few of this class of cattle offered. Prices are quoted at 3½c. to 4c. per lb. A few picked lots sold to-day at \$3.75 to \$3.90 per cwt.

**Butchers' Cattle.**—In this class of cattle the market showed a decided improvement. In some cases fancy prices were paid for Christmas trade. Twenty choice heifers sold at \$4.25, averaging 1,123 lbs. each. Some choice heifers from the district of Fergus and Elora brought the top price—\$4.75. One load of 20 cattle, averaging 1,080 lbs., brought \$4.25 per cwt. Two steers and one heifer, averaging 1,334 lbs. each, extra choice quality, fetched \$4.75 per cwt.

**Stockers and Feeders.**—Contrary to all expectations, there was a good demand from Buffalo, principally for light stockers. Prices ruled from 2½c. to 3c. per lb.

**Feeders.**—A number of farmers were on the market looking for feeders. Evidently the quality did not satisfy them, as only a very few head were taken, at 3c. to 3½c. per lb. Mr. Wm. Crealock purchased 30 head at \$3.30 per cwt.

**Sheep and Lambs.**—There was a firmer tone to this trade. Lambs sell for \$4.25 to \$4.40 per cwt., extra choice going up to \$4.50. Some were bought at \$2.50 to \$4.50 per head.

**Sheep.**—Shipping sheep are steady, at from 3c. to 3½c. per lb. Bucks sold for 2½c. per lb.

**Cattle continue scarce.** There is a good demand for choice veals. Prices are from \$6 to \$8, according to size and quality. All kinds sell at prices ranging from \$2 to \$8 per head.

**Milk Cows** are in good demand; only 15 on the market, sold at \$25 to \$45, extra choice bringing as high as \$50.

**Hogs.**—The prices of hogs have touched bottom; only 500 on offer last Friday. That price of 4c. put the brake on. Now they are again on the up-grade; 4½c. for all sorts is the price offered to-day. Bacon advanced 1 shilling per cwt. at Liverpool on Saturday last, which means nearly 1c. per live weight here. Thick fat and light hogs are stored in good demand at the same figure. Hogs are dull, at 2c.; sows in 3c. per lb.

**Dressed Hogs.**—Holders are asking slightly higher prices for dressed hogs than packers are willing to pay.

Car lots are quoted and have been purchased at \$5.50 on track. In farmer's loads the prices are firm, at \$5.75 to \$6. Light weights, 100 to 150 pounds, are quoted at \$5.40.

**Potatoes.**—A new class of vegetables was on exhibition to-day, evaporated onions and potatoes; these are for packing over the hills to the Klondyke. Potatoes are quoted at 75c. per bag, with the promise of a rise to 90c. next week.

**Wheat.**—Tone of this market was firm, and exporters were active buyers. Chatham reports to the Board of Trade that the past season has been the most successful in the history of that port. They have exported over 100,000 bushels of grain. Most of this has been exported via Buffalo to the Old Country. Vessel rates are 2½c. per bushel to Buffalo, and 5c. by rail. The receipts of grain on this market amounted to 4,000 bushels, selling: White, at 84c.; Red, 85c.; and Groce at 78½c. per bushel. Wheat is in excellent demand, large quantities being taken daily by local exporters. Oats, peas, rye, and feed barley are all wanted by exporters.

## POULTRY FOR ENGLAND.

Mr. A. J. King, the produce merchant, is making enormous shipments of poultry to the English market for the Christmas trade. Five thousand geese, 1,000 ducks, 1,000 chickens, and about 16,000 turkeys—in all, about \$20,000 of



Canadian poultry will be placed on the English market by Mr. King. For the last couple of days over 1,000 geese a day have been killed, plucked and chilled at the warehouse of the Toronto Cold Storage Company, and this week an enormous number of turkeys will be treated in the same way.

Hay sold at \$3.50 to \$10 per ton; about 25 loads on the market to-day. Straw scarce and wanted; it sells at \$9 per ton. Baled Hay—Car lots on track, of No. 1, sell at \$8.50; No. 2 is quoted at \$7.50 to \$8.

Considerable gains are shown in the export returns from Montreal for the season just closed. The following tabulated statement shows increased amounts of shipments, particularly of wheat, oats, rye, etc., while the decreases, compared with last year, are mainly seen in preserved meat and fruits:

Table with 2 columns: 1897, 1896. Rows include Wheat, bushels; Corn; Peas; Oats; Barley; Rye; Flour, barrels; Pork; Lard; Apples; Meat, packages; Eggs, cases; Bacon, bpkcs; Cheese; Butter.

The imports and exports of the Dominion for the four months of the fiscal year ending October 31st, 1897, show a considerable increase in the volume of business. There was an increase in the aggregate trade of the country of \$16,560,412. The exports for the month show an increase of \$15,485,230, while the imports are greater by one million and a quarter than they were in 1896.

The figures for the four months are:

Table with 2 columns: 1896, 1897. Rows include Produce of the mine; Fisheries; Forest; Animals and products; Agricultural products; Manufactures; Miscellaneous articles.

Increase for the year 1897, \$15,485,230.

It will be seen that the exports under the head of agricultural products have more than doubled during the four months, while there is an increase of over \$5,000,000 in animals and their products. This does not include any returns from the port of Vancouver, B. C., owing to the Yukon trade the returns ought to be materially enlarged.

Mr. A. Maybes had four loads of cattle purchased in Chicago on the Toronto market to day for the Old Country. They were a load of Galloways, two loads of Herefords and one load of Shorthorns; each one of these animals weighed over 1,400, and many of them went over 1,500. They were being reared and fed previous to their ocean trip. Does it pay our buyers to journey to Chicago, pay 6c per lb., freight charges, expenses, etc. They say that they have faith in the business. Why do not Canadian producers these cattle? Dec. 11, 1897.

Toronto Markets May Undergo a Change.

There is a proposition to transfer the cattle market from its present position to a location at the head of Dundas street, the following is the account of income and expenditure for the last six years:

Table with 2 columns: Income, Expenditure. Rows for years 1892, 1893, 1894, 1895, 1896, 1897.

The expenditure not only includes the maintenance but the cost of the bridge, about \$19,000, the new sheds, sheep pens, overhead runway, new hog pens in the annex; in all about \$125,000 of works. The receipts from the cattle market have been in the past from \$4,000 to \$5,000 per annum; last year they amounted to \$20,000. The city are offered the sum of \$10,000 per annum in lieu of all privileges by the Chicago firm of meat packers; in fact, we are informed that Messrs. Swift & Co., the prime movers in the scheme, have already employed a surveyor to go over the ground and an architect to prepare the plans of the building required. It is recognized that the franchise of the market privileges are annually becoming more valuable, and this company, of which a local member is proposed for president, will make a proposition to the city to acquire this franchise. If the proposition of the company is accepted, the new market will be constructed on an elaborate scale, in connection with which pork packing, meat canning, etc., will be adjuncts with the market, on a similar but smaller scale than that carried on in Chicago.

Montreal Markets.

Export Cattle.—With the close of navigation from this port, the bulk of what little export buying there was at these yards almost ceased, but there is even yet frequent purchases made to put into a car to fill up a consignment, but as the prices are only such as paid for best butchers' cattle there cannot be said to be any export demand. Range 4c. to 4 1/2c. per lb.

Butchers' Cattle.—Good clearances of late, resultants from rather tight runs and an absence of prime cattle, have kept this market in a pretty fair condition, and butchers are doing not a little growling because they are finding it so difficult to secure a sufficient quantity of real prime meat, on each market, and it is this scarcity which is really keeping the market so firm and steady in all grades. Choice beefs sold as high as 4 1/2c. per lb. on Monday, Dec. 6th, and quite a few up to 4 1/4c., the bulk of the stuff going across the scale at 3c. to 4c. per lb.

Sheep and Lambs.—In conversation yesterday with a butcher who kills several cars of stock each week, he stated that he had just purchased some ninety lambs and sheep, adding that there were amongst the lot a few sheep fit to kill, but that he had to take them and be very glad to get them as it was. This serves to show how good a market there is for good lambs here. Choice lambs make easily up to 4 1/2c.; secondaries, 4c. to 4 1/4c.; sheep, 2 1/2c. to 3 1/2c. per lb.

Calves.—Very few offered; \$2 to \$12 each. Dead Meat Market.—The good clearance and strong tone on last live stock market was not without its effect on the dressed meat trade, although no advance took place. The soft weather which has set in since Monday, however, will very quickly knock this market out. Sales are much as follows:

Table with 2 columns: Choice light hogs, Good hogs, Heavy fats, Turkeys, Ducks, Chickens, Geese, Beef, hind quarters.

Chatty Stock Letter from Chicago.

(BY OUR SPECIAL CORRESPONDENT.) Following are the current and comparative prices for the various grades of live stock:—

Table with columns: CATTLE, Range of Prices, Present, Top prices ago, 1896, 1895. Rows include 1500 lbs. up, 1350 @ 1500, 1200 @ 1350, 1050 @ 1200, 900 @ 1050, Fat cows and heifers, Canning cows, Bulls, Calves, Texas steers, Western C. & H., Western cows, Hogs, Mixed, Heavy, Light, Pigs, Sheep, Natives, Western, Lambs.

After the Thanksgiving holiday and the close of the range cattle season the market for native beef cattle, except fancy tops, was in bad shape, as it usually is.

The cold weather is bringing the cattle, and there is a holiday poultry glut in the meat market which is being quite seriously felt by the stock trade.

The cattle situation at present is a little unfortunate for the farmer. The supply of fat cattle is comparatively heavy and owners who have their stock in good condition are not anxious to hold. There is a strong disposition to ship cattle, even before they are in good flesh. On the other hand, the holiday season is approaching, and buyers want only the best, and not a great many of them, unless they are just suitable in weight.

A well known authority on the cattle situation says: A little more confidence in the future market is needed. Of course some feeders are turning off their more undesirable steers to make room for better sorts and others are shipping who do not care to winter the stock, but the majority, it is safe to say, are shipping through fear of a slump in prices.

An Omaha man says Nebraska is feeding a third more cattle than ever before, and they will commence to come to market about the middle of this month.

It is reported that more cattle are being fed in Texas than a year ago. Cattle feeders who paid such extravagant prices for young cattle are not quite comfortable at present. The first of the cotton-seed meal fed Texas cattle of the season came to market in fair shape. Sales included one shipment, consisting of 48 steers, 1,079 lbs., \$4.05; 65 steers, 1,101 lbs. \$3.85, and some bulls at \$3.35. The hog market seems to have been pretty well corralled by the packers. They are paying about \$3.25 for average heavy packing hogs, \$3.40 for good medium weights, and mostly under \$3.50 for bacon grades.

Here is a "straw" on the quality of the hogs: The 212,967 hogs received here last week averaged 257 lbs., against 259 lbs. the previous week, 243 lbs. a month ago, 253 lbs. two months ago, 259 lbs. a year ago, 246 lbs. two years ago, and 250 lbs. three years ago. The 7,490,849 hogs received at Chicago the first eleven months of this year averaged 242 lbs., the 6,870,678 received the corresponding period last year averaged 245 lbs., and the 7,104,317 received the first eleven months of 1895 averaged only 229 lbs.

The general opinion is that hog packers will make money by the wholesale this winter, as prices for hogs are so low and the demand for meat is so good.

Following are some of the estimates on the sheep being fed in Nebraska: As is natural to expect, opinions vary greatly, ranging from 500,000 to a million. R. S. Mathison, of Swift and Company, places the number close to a million. George McCarthy says 500,000 will cover it. Court Kleman makes it about 750,000, based on a careful estimate of the Omaha agent of the Union Pacific. "Bill" Smith says he will wager three years ago there were a million. Charlie Buel, who has just returned from Nebraska, says that so many small feeders are in the business it is impossible to estimate with any degree of accuracy how many are on feed, but he figures about a million.

Receipts of cattle, hogs and sheep at the undermentioned markets for the first eleven months of 1897, with comparisons:

Table with columns: Chicago, Kansas City, Omaha, St. Louis, At four points. Rows for years 1897, 1896, Increase, Decrease.

The live stock competition at the Trans-Mississippi Exposition at Omaha next year will be held Oct. 1 to 25. The American Hereford Breeders' Association has hung up \$3,000 in special prizes for white-faces.

At the Dexter Park horse sale, Dec. 8 to 10, the following were among the highest sales: Donough—trial 2:11, b. h. 6 years, by Norway 2:14; dam Impression, by Madrid—Murphy Stock Farm, Park Ridge, Ill., \$1,150. Bessie Bonehill—2:05 1/2, gr m. 5 years, by Empire Wilkes; dam Arab Girl, by Crittenden—C. L. Evans, Sciota, Ill., \$1,400. Thorne (3)—2:11, b. f. 3 years, by Wilkes Boy 2:21; dam Kinora, by Mambrino Patchen—H. W. Brown, Salt Lake City, Utah, \$3,100.

Three-Horse Tread Power.

My tread power cost, in 1895, \$135; the price now I believe is \$125. Three horses on it will equal four on a sweep power. I fatten 22 head of cattle every year and keep five horses. We cut all their feed and bedding and grind all their grain. Mine has cost nothing for repairs yet; if set level and kept well oiled it should last as long as any other power. In comparison with windmill, I consider it better, as you have not to wait for the wind to blow, and it is a steadier power. It needs no harness or driver, and the walk never gets bad in wet weather. Perth Co., Ont. ANDREW ARCHIBALD, JR.

OUR LIVE STOCK ILLUSTRATIONS.

A Sweepstakes Pair of Shorthorns.

The subjects of the illustration on page 542 of this issue are the sweepstakes male and female Shorthorns, any age, at the Toronto Industrial and Ottawa Central Expositions, 1897. The bull Nominee—1928—was bred by E. Gaunt & Son, St. Helen's, Ont. He was sired by Earl of Moray—16188—, and out of Starlight—19274—. He was calved in November, 1892, and purchased by Capt. T. E. Robson, Ilderton, Ont., his exhibitor, in June, 1896. In the fall of 1896 he won second prize at Toronto and London Exhibitions. In 1897 his winnings were first and sweepstakes at Toronto; and Ottawa, second at London, and headed the first-prize herds at Toronto, Ottawa and London Exhibitions. The heifer Mysie's Rose—28852—was bred by her present owner, Capt. Robson. She was sired by Royal Chief—19269—, and out of Mysie's Gem—17046—. She was calved in April, 1895. In 1896, in moderate show form, she took third prize at the London Exhibition; while in '97 her victories were the same as those of Nominee, winning two firsts, two sweepstakes, one second award, and was one of the first-prize herd at the three large Ontario shows. Since the shows, Nominee has been sold to Mr. Jos. Lawrence, Manitoba, his place being filled in the Captain's herd by imported Guardsman—18956—, purchased from J. M. Gardhouse, Highfield, Ont. Guardsman is the sire of St. Valentine, the bull that won the sweepstakes award at many of the largest American shows in 1897, including Springfield, St. Louis, and others. He is owned by J. G. Robbins & Sons, Horace, Ind.

Goldfinder II, Clydesdale, owned by James Henderson, Belton, Ont.

Goldfinder II. (10190) was bred by Wm. Kerr Houdston, Girvan, Scotland; foaled in April, 1895, and imported about one year ago. He is sired by Goldfinder, a Highland and Agricultural Society first prize winner, tracing to Darnley and Prince of Wales. His present owner, Mr. James Henderson, Belton, Ont., won the following prizes on him in 1897: First and sweepstakes at St. Mary's, Ont., Spring Show; first at Toronto, Canadian Horse Show; second at Toronto Industrial; and first and sweepstakes over all ages at the London Western. See page 543 for illustration.

A Prize-winning Yorkshire Sow.

Miss Stamina—2136—, two years old, property of J. E. Brethour, Burford, Ont., winner of second prize, Toronto Industrial, and also at London, taking second place only to her pen companion, Oak Lodge Primrose—2099—, which has made a record by winning first prize for three years in succession at Toronto. Miss Stamina was one of the Oak Lodge herd winning first prize at Toronto and London exhibitions. See page 549.

Prize-winning Jersey, "Manor Lass 2nd."

The lifelike portrait, given on page 547, is of the beautiful prize-winning Jersey cow, Manor Lass 2nd 6015, J. H. B.; owned by Mr. R. J. Fleming, ex-mayor of Toronto; sire Lagarno's Wonder 1847; dam Manor Lass 7740; both sire and dam being prize animals. As a two-year-old she took first prize over the island of Jersey in 1896; as a three-year-old she obtained 1st prize at the Toronto Exhibition in 1897, and also sweepstakes as best Jersey female, any age. At every place exhibited she has taken sweepstakes. She is now about three years and six months old, and milked 38 pounds a day with second calf. She was imported by Mr. F. S. Peir, of Mount Morris, N. Y. Her first calf has also taken first prize on the island as a yearling, and her second calf took third prize here in a competition of over twenty, and gives promise of taking first wherever shown.

Graham Bros.' Young Macqueen.

The sweepstakes Clydesdale stallion, Young Macqueen #33, owned by Graham Bros., Clearemont, Ont., is well represented in the illustration on page 544. He was bred by R. E. Ogilvie, Madison, Wis., and foaled in 1894. He was sired by Macqueen 5300 (imported), which he much resembles, and out of Bell of Lyons 3511 (imported). Before coming to Canada, in the spring of 1897, in many showing contests he never suffered a defeat. His first public appearance in Canada was at the Canadian Horse Show, Toronto, last spring, where he won first in his class and sweepstakes over all ages, and at the Toronto Industrial in September he performed a similar feat. His greatest distinction, however, was won at the late Chicago Horse Show, where, in competition with the best mature Clydesdales, he won first premiums, besides the championship award for best draft stallion of any breed three years old and over, as well as the grand sweepstakes for the best draft stallion, any breed or age, which entitles him to the designation, "Sweepstakes Draft Horse of America."

Gold Medal Herd of Holsteins.

The Holstein-Friesian herd illustrated in this issue are the property of Mr. G. W. Clemons, Secretary of the Canadian Holstein-Friesian Association, St. George, Ont. Count Mink Mercedes (221); sire Mink's Mercedes Baron; dam Belle of Orchardside 2nd; winner of 2nd at Toronto, first and sweepstakes at London and Ottawa in 1897. Cornelia Artis (1855); sire Cornelia Tensen's Mink Mercedes; dam Artis Kassie; winner of third at Toronto in a class of 20 cows, second at London and Ottawa, also second in the dairy test at Ottawa, 1897; record at four years, 62 lbs. per day. Inka Rose Pieterje DeKol (1354); sire DeKol 2nd's Netherland; dam Inka 4th's Pieterje Rose; winner of first prize at Ottawa, 1897; record, 64 lbs. per day at 4 years. Mondamin's Daisy Barrington (1356); sire Orphe's Lytle; dam Mondamin's Daisy; first prize three-year-old at Toronto, London and Ottawa, 1897; also sweepstakes at the two latter places; record at 2 years, 62 lbs. per day. Queen DeKol 2nd (1819); sire Empress Josephine 3rd's Sir Mechthilde; dam Queen DeKol; winner of second prize at Toronto and Ottawa and first at London in 1897; also first at Provincial Winter Show, and Prince of Wales sweepstakes over all breeds; record at two years, 53 lbs. per day and 2.21 lbs. butter in public test. Cash winnings for 1897, over \$500; also one gold and one silver medal and six diplomas.





A DOCTOR OF THE OLD SCHOOL.

BY IAN MACLAREN.

(Continued from page 527.)

"Can naethin' be done, doctor? Ye savit Flora Cammill, and young Sabrae, an' yon shepherd's wife Dunleith wy, an' we were a' sae proud o' ye, an' pleased tae think that ye hed kept deith frae anither hame. Can ye no think o' somethin' tae help Annie, and gie her back tae her man and bairnies?" and Tammas searched the doctor's face in the cold, weird light.

"There's nae poore in heaven or airth like love," Marget said to me afterwards; "it makes the weak strong and the dumb to speak. Our herts were as water afore Tammas's words, an' a' saw the doctor shake in his saddle. A' never kent till that meent hoo he hed a share in a'body's grief, and carried the heaviest weicht o' a' the Glen. A' peedid him wi' Tammas lookin' at him sae wistfully, as if he hed the keys o' life an' deith in his hands. But he was honest, and wudna hold out a' false houp tae deceive a sore hert or win escape for himself."

"Ye needa plead wi' me, Tammas, to dae the best a' can for yir wife. Man, a' kent her lang afore ye ever loved her; a' brocht her intae the world, and a' saw her through the fever when she was a bit lassie; a' closed her mither's een, and it was me hed tae tell her she was an orphan, an' nae man was better pleased when she got a gude husband, and a' helpit her wi' her fower bairns. A' ve naither wife nor bairns o' ma own, an' a' coont a' the fouk o' the Glen ma family. Div ye think a' wudna sae Annie if I cud? If there was a man in Muirtown at ood dae mair for her, a' d' have him this vera night, but a' the doctors in Perthshire are helpless for this tribble."

"Tammas, ma puir fallow, if it could avail, a' tell ye a' wud lay doon this auld worn-out ruckle o' a body o' mine juist tae see ye bath sittin' at the fireside, an' the bairns round ye coohty an' cauty again; but it's no tae be, Tammas, it's no tae be."

"When a' lookit at the doctor's face," Marget said, "a' thoocht him the winsomest man a' ever saw. He was transfigured that night, for a' m' judging there' nae transfiguration like love."

"It's God's wull an' maun be borne, but it's a sair wull for me, an' a' m' no ungratefu' tae you, doctor, for a' ye've dune and what ye said the night," and Tammas went back to sit with Annie for the last time.

Jess picked her way through the deep snow to the main road, with a skill that came of long experience, and the doctor held converse with her according to his wont.

"Eh, Jess wumman, yon was the hardest wark a' hae tae face, and a' wud rither hae ta'en ma chance o' anither row in a Glen Urtaoch drift than tell Tammas Mitchell his wife was deoin."

"A' said she cudna be cured, and it was true, for there's juist a' man in the land fit for't, and they might as weel try tae get the mune oot o' heaven. Sae a' said naethin' tae vex Tammas's hert, for it's heavy enouch without regrets."

"But it's hard, Jess, that money wud buy life after a', an' if Annie was a duchess her man wudna lose her; but bein' only a puir cottar's wife, she maun dee afore the week's oot."

"Gin we hed him in the morn there's little doot she wud be saved, for he herna lost mair than five per cent. o' his cases, and they'll be puir toon's cratur, no strappin' women like Annie."

"It's oot o' the question, Jess, sae hurry up, lass, for we've hed a heavy day. But it wud be the grandest thing that was ever dune in the Glen in oor time if it could be managed by hook or crook."

"We'll gang and see Drumsheugh, Jess; he's anither man in the land fit for't, and he was a' kinder than fouk kent; and the doctor passed at a gallop through the village, whose light shone across the white frost-bound road."

"Come in by'r door, a' heard ye on the road; ye'll hae been at Tammas Mitchell's; hoo's the gudewife? a' doot she's sober."

"Annie's deoin', Drumsheugh, an' Tammas is like to brak his hert."

"That's no lichtsome, doctor, no lichtsome ava, for a' dinna ken ony man in Drumtochty sae bound up in his wife as Tammas, and there's no a bonnier wumman o' her age crosses oor kirk door than Annie, nor a cleverer at her wark. Man, ye'll need tae pit yir brains in steep. Is she clean beyond ye?"

"Beyond me and every ither in the land but ane, and it wud cost a hundred guineas tae bring him tae Drumtochty."

"Cartes, he's no blate; it's a fell charge for a short day's work; but hundred or no hundred we'll hae him, an' no let Annie gang, and her no half her years."

"Are ye meanin' it, Drumsheugh?" and MacLure turned white below the tan.

"William MacLure," said Drumsheugh, in one of the few confidences that ever broke the Drumtochty reserve, "a' m' a lonely man, wi' naebody o' ma ain olude tae care for me livin', or tae lift me intae ma coffin when a' m' deid."

"A' fecht awa at Muirtown market for an extra pund on a beast, or a shillin' on the quarter o' barley, and what's the gude o' it? Burnbrae gaes aff tae get a goon for his wife or a buke for his college laddie, an' Lachlan Campbell'll no leave the place noo without a ribbon for Flora."

"Eika man in the Kildrummie train has some bit fairin' in his pouch for the fouk at hame that he's bocht wi' the siller he won."

"But there's naebody tae be lookin' oot for me, an' comin' doon the road tae meet me, and daffin' (joking) wi' me about their fairin', or feeling ma pockets. Ou ay, a've seen it a' at ither hooses, though they tried tae hide it frae me for fear a' wud lauch at them. Me lauch, wi' ma cauld, empty hame!"

"Yir the only man kens, Weelum, that I aince loved the noblest wumman in the Glen or onywhere, an' a' love her still, but wud naither love noo."

"She hed given her heart tae anither, or a've thoocht a' might hae won her, though nae man be worthy o' sic a gift. Ma hert turned tae bitterness, but that passed awa beside the brier bush whar George Hoolay yon sad simmer time. Some day a'll tell ye ma story, Weelum, for you an' me are auld friends, and will be till we dee."

MacLure felt beneath the table for Drumsheugh's hand, but neither man looked at the other.

"Weel, a' we can dae noo, Weelum, gin we haena mickle brightness in oor ain hames, is tae keep the licht frae gaein' oot in anither hoose. Write the telegram, man, and Sandy'll send it aff frae Kildrummie this vera night, and ye'll hae yir man the morn."

"Yir the man a' coonted ye, Drumsheugh, but ye'll grant me sae favour. Ye'll let me pay the half, bit by bit—a ken yir wullin' tae dae't a',—but a' haena mony pleasures, an' a' wud like tae hae ma ain share in savin' Annie's life."

Next morning a figure received Sir George on the Kildrummie platform, whom that famous surgeon took for a gillie, but who introduced himself as "MacLure of Drumtochty." It seemed as if the East had come to meet the West when these two stood together, the one in travelling furs,

handsome and distinguished, with his strong, cultured face and carriage of authority, a characteristic type of his profession; and the other more marvellously dressed than ever, for Drumsheugh's topcoat had been forced upon him for the occasion; his face and neck one redness with the bliter cold; rough and ungainly, yet not without some signs of power in his eye and voice, the most heroic type of his noble profession. MacLure compassed the precious arrival with observances till he was securely seated in Drumsheugh's cogcart—a vehicle that lent itself to history—with two full-sized plaid added to his equipment—Drumsheugh and Hillocks had oob been requisitioned—and MacLure wrapped another plaid round a leather case, which was placed below the seat with such reverence as might be given to the Queen's regalia. Peter attended their departure full of interest, and as soon as they were in the fir woods MacLure explained that it would be an eventful journey.

"It's a' richt in here, for the wind dimes get at the snaw, but the drifts are deep in the Glen, and th'ill be some engineerin' afore we get tae oor destination."

Four times they left the road and took their way over fields, twice they forced a passage through a slap in a dyke, thrice they used gaps in the paling which MacLure had made on his downward journey.

"A' seleckit the road this mornin', an' a' ken the depth tae an inch; we'll get through this steadin' here tae the main road, but oor worst job'll be crossin' the Tochty."

"Ye see the bridge has been shakin' wi' this winter's flood, and we daurna venture on it, sae we hev tae ford, and the snaw's been meltin' up Urtaoch way. There's nae doot the waker's grey big, an' it's threatenin' tae rise, but we'll win through wi' a warstle."

"It might be safer tae lift the instruments oot o' reach o' the water; wud ye mind haddin' them on yir knee till we're ower, an' keep firm in yir seat in case we come on a stane in the bed o' the river?"

By this time they had come to the edge, and it was not a cheering sight. The Tochty had spread out over the meadows, and while they waited they could see it cover another two inches on the trunk of a tree. There are summer floods, when the water is brown and flecked with foam, but this was a winter flood, which is black and sullen, and runs in the centre with a strong, fierce, silent current. Upon the opposite side Hillocks stood to give directions by word and hand, and the ford was on his land, and none knew the Tochty better in all its ways.

They passed through the shallow water without mishap, save when the wheel struck a hidden stone or fell suddenly into a rat; but when they neared the body of the river MacLure halted, to give Jess a minute's breathing.

"It'll tak ye a' yir time, lass, an' a' wud rither be on yir back; but ye never failed me yet, and a' wumman's life is hangin' on the crossin'."

With the first plunge into the bed of the stream the water rose to the knees, and then crept up to the shafts, so that the surgeon could feel it lapping in about his feet, while the dogcart began to quiver, and it seemed as if it were to be carried away. Sir George was brave as most men, but he had never forded a Highland river in flood, and the mass of black water racing past beneath, before, behind him, affected his imagination and shook his nerves. He rose from his seat and ordered MacLure to turn back, declaring that he would be content to wait and eternally if he allowed himself to be drowned for any person.

"Sit doon," thundered MacLure; "condemned ye will be suner or later gin ye shirk yir duty, but through the water ye gang the day."

Both men spoke much more strongly and shortly, but this is what they intended to say, and it was MacLure that prevailed.

Jess trailed her feet along the ground with cunning art, and held her shoulder against the stream; MacLure leant forward in his seat, a rein in each hand, his eyes fixed on Hillocks, who was now standing up to the waist in the water, shouting directions and cheering on horse and driver.

"Haud tae the richt, doctor; there's a hole yonder. Keep oot o' for ony sake. That's it; yir daein' fine. Steady, man, steady. Yir at the deepest; sit heavy in yir seats. Up the channel noo, an' ye'll be oot o' the swirl. Weel dune, Jess, weel dune, auld mare! Mak straight for me, doctor, an' a'll gie ye the road oot. Ma word, ye've dune yir best, baith o' ye this mornin'," cried Hillocks, splashing up to the dogcart, now in the shallows.

"Sall, it was titch an' go for a meenut in the middle; a' Helan' ford is a kittle (hazardous) road in the snaw time, but ye're safe noo."

"Gin ye com' for ye, ye're a clean bluided, weel-livin'—"

"All com' for ye, ye're a clean bluided, weel-livin'—"

Fifty minutes did the fall rise and fall, save twice, when Tammas crept to the door and listened, the dog lifting his head and whining.

It seemed twelve hours instead of one when the door swung back, and MacLure filled the doorway, preceded by a great burst of light, for the sun had arisen on the snow.

His face was as tidings of great joy, and E spech told me that there was nothing like it to be seen that afternoon for glory, save the sun itself in the heavens.

"A' never saw the marrow o' t, Tammas, an' a'll never see the like again; it's a' ower, man, without a hitch frae beginnin' tae end, and she's fa'in' asleep as fine as ye like."

"Dis he think Annie . . . 'll live?"

"Of course he dis, and he's about the hoose inside a month; that's the gude o' bein' a' clean bluided, weel-livin'—"

"Preserve ye, man, what's wrang wi' ye? it's a mercy a' kept ye, or we wud hev hed anither job for Sir George."

"Ye're a' richt noo; sit doon on the strae. A' all come back in a while, an' ye'll see Annie juist for a meenut, but ye maunna say a word."

Marget took him in and let him kneel by Annie's bedside. He said nothing then or afterwards, for speech came only once in his lifetime to Tammas, but Annie whispered, "Ma ain dear man."

When the doctor placed the precious bag beside Sir George in our solitary first next morning, he laid a cheque beside it and was about to leave.

"No, no," said the great man. "Mrs. Macfadyen and I were on the gos-ip last night, and I know the whole story about you and your friend."

"You have some right to call me a coward, but I'll never let you count me a mean, miserly rascal," and the cheque with Drumsheugh's painful writing fell in fifty pieces on the floor.

As the train began to move, a voice from the first called so that all in the station heard.

"Giv's another shake of your hand, MacLure; I'm proud to have met you; you are an honour to our profession. Mind the antiseptic dressings."

It was market day, but only Jamie Soutar and Hillocks had ventured down.

"Did ye hear yon, Hillocks? hoo dae ye feel? A'll no deny a'm lifted."

Halfway to the Junction Hillocks had recovered, and began to grasp the situation.

"Till's what he said. A' wud like to hae it exact for Drumtochty."

"Thae's the ecidental words, an' they're true; there's no

man in Drumtochty disna ken that, except ane."

"An' wha's that, Jamie?"

"It's Weelum MacLure himsel. Man, a've often gined that he sud fecht awa for us, and maybe dee before he kent that he hed githered mair luv' than ony man in the Glen."

"A' m' proud tae hae met ye," says Sir George, an' hum the greetest doctor in the land. "Yir an honour tae oor profession."

"Hillocks, a' wudna hae missed it for twenty notes," said James Soutar, cynic-in-ordinary to the parish of Drumtochty.

III. A FIGHT WITH DEATH.

When Drumsheugh's grievance was brought to the gates of death by fever, caught, as was supposed, on an adventurous visit to Glasgow, the London doctor at Lord Kilspindie's shooting lodge looked in on his way from the moor, and declared it impossible for Saunders to live through the night.

"I give him six hours, more or less; it is only a question of time," said the oracle, buttoning his gloves and getting into the brake; "tell your parish doctor that I was sorry not to have met him."

Bell heard this verdict from behind the door, and gave way utterly, but Drumsheugh declined to accept it as final, and devoted himself to consolation.

"Dinna greet like that, Bell wumman, sae lang as Saunders is still livin'; a'll never give up hoops, for ma pairt, till oor ain man says the word."

"A' the doctors in the land dinna ken as muckle about us as Weelum MacLure, an' he's ill tae beat when he's tryin' tae save a man's life."

MacLure, on his coming, would say nothing, either weal or woe, till he had examined Saunders. Suddenly his face turned into iron before their eyes, and he looked like one encountering a merciless foe. For there was a feud between MacLure and a certain mighty power which had lasted for forty years in Drumtochty.

"The London doctor said that Saunders wud sough awa afore mornin', did he? Weel, he's an authority on fevers an' sic like diseases, an' ought tae ken."

"It's maybe presumptuous o' me tae differ frae him, and it wudna be vera respectfu' o' Saunders tae live after this peenion. But Saunders was aye thraun an' ill tae drive, an' he's as like as no tae gang his ain gait."

"A' m' no meanin' tae reflect on sae clever a man, but he didna ken the situation. He can read fevers like a buik, but he never cam across sic a thing as the Drumtochty constitution a' his days."

"Ye see, when onybody gets as low as puir Saunders here, it's juist a hand to hand wrastle atween the fever and his constitution, an' of course, if he hed been a shalpit, feckless effigy o' a cratur, fed on tea an' made dishes and pushioned wi' bad air, Saunders wud hae nae chance; he was boond tae gae oot like the snuff o' a candle."

But Saunders has been flin' his lungs for five and thirty year wi' strong Drumtochty air, an' eatin' naethin' but kirny atmeal, and drinkin' but fresh milk frae the coo, an' followin' the ploo through the new-turned, sweet-smellin' earth, an' smingin' the scythe in the haytime and harvest, till the legs an' arms o' him were iron, an' his chest was like the cuttin' o' an oak tree.

"He's a waesome sicht the night, but Saunders was a buirdly man aince, and wud never lat his life be taken lightly frae him. Na, na, he herna sinned against Nature, and Nature'll stand by him noo in his oor o' distress."

"A' daurna say yea, Bell, muckle as a' wud like, for this is an evil disease, cunnin' an' treacherous as the deevil himsel', but a' winna say nay, sae keep yir hert frae despair."

"It will be a sair fecht, but it'll be settled one wy or anither by sax o'clock the morn's morn. Nae man can propheet hoo it'll end, but sae thing is certain, a'll no see deith tak a Drumtochty man afore his time if a' can help it."

"Noo, Bell ma wumman, yir near deid wi' t're, an' nae wonder. Ye've dune a' ye cud for yir man, an' ye'll lippen (trust him) the nicht tae Drumtochty an' me; we'll no fail him or you."

"Lie doon an' rest, an' if it be the wull o' the Almighty'll wauken ye in the mornin' tae see a livin' conscious man, an' if it be itherwise a'll come for ye the suner, Bell," and the big red hand went out to the anxious wife. "A' gie ye ma word."

Bell leant over the bed, and at the sight of Saunders' face a superstitious dread seized her.

"See, doctor, the shadow o' deith is on him that never lifts. A've seen it afore, on ma father an' mither. A' canna leave him, a' canna leav' him."

"It's hoverin', Bell, but it hasna fallen; please God it never wull. Gang but and get some sleep, for it's time we were at oor work."

"The doctors in the toons hae nurses an' a kinds o' handy apparatus," said MacLure to Drumsheugh when Bell had gone, "but you an' me'll need tae be nurse the nicht, an' use sic things as we hev."

"It'll be a lang nicht and anxious wark, but a' wud rither hae ye, auld freend, wi' me than ony man in the Glen. Ye're no feared tae gie a hand?"

"Me feared? No likely. Man, Saunders cam tae me a haffin, and hes been on Drumtochty for twenty years, an' though he be a dour chiel, he's a faithfu' servant as ever lived. It's waesome tae see him lyin' there moaning like some dumb animal frae mornin' tae nicht, an' no able tae answer his ain wife when she speaks."

"Div ye think, Weelum, he hes a chance?"

"That he hes, at ony rate, and it'll no be your blame or mine if he herna mair."

While he was speaking, MacLure took off his coat and waistcoat and hung them on the back of the door. Then he rolled up the sleeves of his shirt and laid bare two arms that were nothing but bone and muscle.

"It g'd ma very blood rin faster tae the end of ma fingers juist tae look at him," Drumsheugh expatiated afterwards to Hillocks, "for a' saw noo that there was tae be a stand-up fecht atween him an' deith for Saunders, an' when a' thoocht o' Bell an' her bairns, a' kent wha wud win."

"Aff wi' yir coat, Drumsheugh," said MacLure; "ye'll need tae bend yir back the nicht; gither a' the palls in the hoose and fill them at the spring, an' a'll come doon tae help ye wi' the carryin'."

It was a wonderful ascent up the steep pathway from the spring to the cottage on its little knoll, the two men in single file, bareheaded, silent, solemn, each with a pail of water in either hand, MacLure limping painfully in front Drumsheugh blowing behind; and when they laid down their burden in the sick room, where the bits of furniture had been put to a side and a large tub held the centre, Drumsheugh looked curiously at the doctor.

"No, a'm no daft; ye needna be feared; but ye're tae get yir first lesson in medicine the nicht, an' if we win the battle ye can set up for yersel in the Glen."

"There's twa dangers—that Saunders' strength fails, an' that the force o' the fever grows; and we have juist twa weapons."

"Yon milk on the drawers head an' the bottle of whisky is tae keep up the strength, and this cool caller water is tae keep doon the fever."

"We'll cast oot the fever by the virtue o' the earth an' the water."

"Div ye mean tae pit Saunders in the tub?"

"E' hev it noo, Drumsheugh, and that's hoo a' need yir help."

"Man, Hillocks," Drumsheugh used to moralise, as often as he remembered that critical night, "it was humblin' tae see hoo low sickness can bring a poefer' man, an' ocht tae keep us frae pride."

"A month syne there wasna a stronger man in the Glen than Saunders, an' noo he was juist a bundle o' skin and bone, that naither saw nor heard, nor moved nor felt, that kent naethin' that was dune tae him."

[TO BE CONTINUED.]



MINNIE MAY'S DEPARTMENT.

MY DEAR NIECES,—

It will soon be the season for "hurrying to and fro." Many of the young people who are out in the world—probably in distant cities, fighting their way in life—are looking forward to getting home for Christmas. Oh, the thought of getting home! What joyful anticipations and what pleasant memories it brings! Does it not put new energy into one's work and make it easier, and do not the days seem to lag and drag as if they would never go by? And then when the journey has actually begun and we rush along to our destination, we feel as if we would like to fly! By and bye we reach our station and are met by some of our dear ones, and there is hand-shaking all round, and we start for the old home. How well we remember that old tree by the wayside! It has stood there since we were babies. And there is that little creek by which we have so often played in summer days long ago. But a turn of the road comes, and there, there is our dear old home, and there is mother at the door looking for us; and more quickly than words can tell we are home.

And then there are the young people who stay at home—who have to fight their way through life in a different manner—who remain with the old folks to lighten their burden. Is home not as dear and as sweet to them? Perhaps they do not always think so. When the days come in which everything goes wrong and it seems as if one's fingers were all clumsy thumbs, and everybody is cross and in a hurry, and the cows all seem to be what Scotch folks call "chrawn," and the butter won't come, and the bread turns out doughy; then they sigh, and say, "Oh! I wish I could get away from home!" But cheer up, my girls, the days are not all blue. The most of them are rosy; but I suppose we need the blue days to make us appreciate the bright ones. What would home be without you? Why, it would not be home at all, it would only be a house. Who can help father and mother like you? Who could take your place? It is you who make it home to the old folks, so you see what a responsibility rests upon you. And isn't it delightful to make home the pleasantest place in the world? There are so many ways of making it the happiest and brightest spot for all the family.

I hope you have a "cosy corner." I mean a corner of the living-room where the periodicals and magazines lie handy, where father and the boys may rest for a few moments and enjoy a look at their books without feeling that they are in the way and that their absence would be preferable to their presence. In the home of a friend I observed on the wall a long shelf, which contained the ADVOCATE and other magazines and books. Just below the shelf were a lounge and a rocker; and what a glorious "cosy corner" that was! Books and papers were handy, and the lounge was so tempting to tired-out bodies that it was often in use. It was a real home corner.

Besides making the home attractive, it encourages reading; and who can exist without books? They are our best friends sometimes. We can go to them for information on any subject, and they do not scorn us, as some people would, for our ignorance, but cheerfully give us all we ask. By all means let us cultivate an acquaintance with great writers; let us be intimate with as many of them as we can find time to study: Kingsley, Longfellow, Shakespeare, Dickens, Scott, Barrie, Conan Doyle, Ian Maclaren, etc. What a grand list of friends to possess!

Every one of you know the familiar song, "Home, Sweet Home!" but do you know that it was written by a homeless man? The author, John H. Payne, was a lonely man in a strange city, and in his sorrow and loneliness he wrote that beautiful song which everybody loves.

And now, my dear nieces, before I close my letter I must not forget to express the hope that Christmas time will be a very happy season to you all, and that the New Year will be the brightest you have yet seen.

Trusting that 1898 will be a very prosperous year for you, believe me to be,  
Your loving old auntie— MINNIE MAY.

En Usz-Vous?

Does he use it? What a question. Can anyone look at the beaming, wrinkled face and doubt his affection for the snuff offered in such a friendly spirit? He may be persuaded to sit down, too, and have a chat with the jolly old dame, who likes to gossip about her neighbors' affairs as well as anybody.

What a nice, comfortable pair they would make—and the lady evidently will not be behindhand in the courtship. What a pleasure it would be to the tired peddler to listen to her hearty laugh, as the day's adventures are gone over again in the evening. She could not laugh like that unless she had had plenty of practice, and Solomon says, "A merry heart doeth good like a medicine." Indeed, he might go farther and fare worse.

Recipes.

SPICED BEEF (25 OR 30 POUNDS).

One pound brown sugar, quarter pound each allspice and black pepper, two ounces saltpetre, one ounce each nutmegs and cloves, all ground. Rub saltpetre in beef first; mix spices well in large bowl, rub in by degrees; next day mix a lot of dry herbs and add; rub all over the beef; in hole where bone was, piece of suet or fresh fat pork to be put in before tying for boiling. Every day turn and rub, for three or four weeks.

OYSTER PATTIES.

Line patty tins well with thin pastry, pressing it well to the tin. Put a piece of bread or a ball of paper in each; cover them with paste and brush them over with the white of an egg; cut an inch square of thin pastry, place on the center of each; glaze this also with egg, and bake in a quick oven fifteen to twenty minutes. Remove the bread or paper when half cold. Put two tablespoonfuls of butter and two of flour into a thick saucepan; stir them together over the fire till the flour smells cooked, then pour half a cup of oyster liquor and half a pint of milk into the flour and butter (if you have cream use it instead of milk); stir till it is a thick, smooth sauce. Put in oysters and let almost come to a boil; beat the yolks of two eggs; remove oysters for one minute from the fire, then stir the eggs into them till sauce looks like thick custard. Fill the patties with this oyster fricassee, previously made hot by standing in boiling water; also make patty cases hot before filling them.

GRAHAM GEMS.

Three cups of sour milk, one teaspoonful of soda, one of salt, one tablespoonful of brown sugar, one

THE QUIET HOUR.

"Christmas Memories."

O day of gladness, day of joy divine,  
What part in thee have I, since all my light  
Is faded into shadow! Joy is thine,  
But mine's sorrow; and too dim my sight  
Has grown for Christmas sunshine; give to me  
But memory.  
Thoughts dear of other days within my heart  
Hold me apart.  
I cannot bless this Christmas day, so fast  
The tears come—all my blessing is the past.

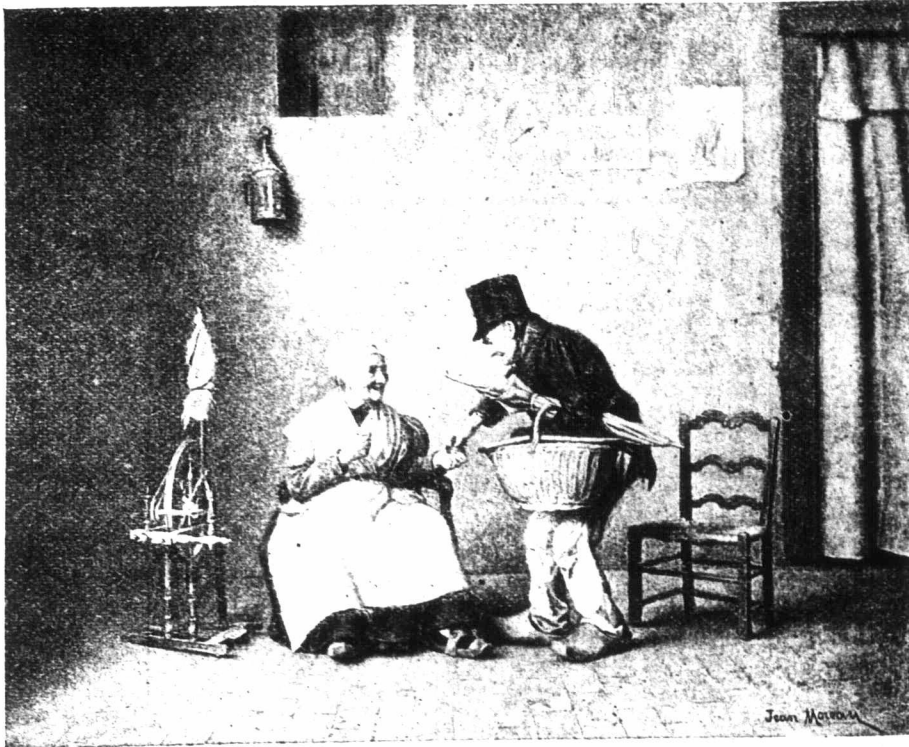
Poor aching heart, poor tired eyes, that see  
Only the empty chair, the vacant place!  
Poor human longing for what cannot be—  
The voice grown silent, the beloved face!  
Love knows—love knows!—but yet, believe me, dear,  
You need not fear  
The Christmas brightness: tears but clear the eyes,  
And, grown more wise,  
The soul looks forth with added power to bless—  
The power of a deeper tenderness.

Gladness is not the mark of empty hearts,  
Nor grief of full ones; neither is there strife  
Twixt joy and sorrow; each to each imparts  
New meaning, children of one mother—life.  
O troubled soul, unconscious of thy strife,  
Behold at length,  
From out the very depths of shadow, shine  
This truth divine,  
That of one spirit is our loss and gain,  
Our deepest comfort and our deepest pain!

The empty joy is that which knows not grief;  
The empty grief is that which gladness fears;  
Of sorrow and of joy is born belief,  
And blessed is the smile that breaks through tears.  
Then let the holly mingle with the yew,  
Dear heart and true,  
For unto God there is nor first nor last—  
Love knows no past,  
With steadfast gaze He looks on hopes and fears,  
And gathers to His feet the passing years.

Christmastide.

Perhaps no season is hailed with such universal joy as Christmas. To the rich and to the poor, at this time comes blessedness. It touches all hearts, and mellows human life, and the earth is richer and happier with each recurring Christmastide. This is the time par excellence for giving and receiving, and is a prime occasion for all to demonstrate by experience that it is "more blessed to give than to receive." To the infinite loss of humanity, far too few know the full import of this supreme blessedness. It is becoming for us, while contemplating God's great gift to us, to remember others and present our offerings "in His name." Christmas will mean more to us if we are the means of making it mean more to others, and our cup of rejoicing will be filled if we contribute towards making glad the hearts of our fellow-men. No one is impervious to the contagious power of kindly deeds. Santa Claus, after all, is a myth, unless we make him a reality. In many a happy dream he will be a prominent figure, and in the waking hours, later on, the dream will "come true." Thus old hearts become young again, and young hearts become still younger because of the abounding joy. To millions this good-natured Christmas burden-bearer will come, and his coming will be hailed with gladness. But in the universal cheer



EN USEZ-VOUS?

of melted lard or butter, one or two beaten eggs; to the egg add the milk; then the sugar and salt; then the Graham flour (with the soda mixed in), together with the lard or butter; make a stiff batter, so that it will drop, not pour, from the spoon. Have the gem pans very hot; fill and bake fifteen minutes in a hot oven.

How She Managed It.

A young couple in a Lancashire village had been courted several years. The young man one day said to the young woman, "Sal, I canna marry thee."

"How's that?" said she.  
"I've changed my mind," said he.  
"Well, I'll tell you what we'll do," said she. "If folk know that it's thee as has given me up I shanna be able to get another chap, but if they think I have given thee up, then I can easy get another chap. So we'll have the banns published, and when the wedding day comes the parson will say to thee, 'Wilt thou have this woman to be thy wedded wife?' and thou must say 'I will'; and when he says to me, 'Wilt thou have this man to be thy wedded husband?' I shall say 'I winna.'"

The day came, and when the minister said, "Wilt thou have this woman to be thy wedded wife?" the man answered "I will."

Then the parson said to the woman, "Wilt thou have this man to be thy wedded husband?" and she said, "I will."

"Why," said the young man, furiously, "you said you would say, 'I winna.'"

"I know that," said the young woman, "but I've changed my mind since."

Attend to your "Farmer's Advocate" subscription early, and avoid regrets for oversight.

there will be many desolate homes and countless joyless hearts, where Santa would not be unwelcome, but where he will not go—unless you send him!

To give Christmas cheer to some of these neglected souls is well worthy of our attention, and a fitting way of serving Him whose nativity the day celebrates. Each one thus engaged becomes a Christopherus—a Christ-bearer—in deed and in truth, to the unfortunate and the forlorn, the very least of whom we, like Him, must designate as "these my brethren." Even "these least" are dear to the Master, and as we do it unto them He regards the deed as done unto Him. Thus observing the auspicious natal day, you may mingle the melody divine with the sadder earthly strains which too frequently fill to overflowing so many human hearts.

"There is silence high in the midnight sky,  
And only the sufferers watch the night,  
But long ago there was song and glow  
A'd a message of joy from the Prince of Light,  
And the Christmas song of the messenger throng  
The echoes of life shall forever prolong."

It is the eve of the day on which I hail my Saviour's birth. Is my heart prepared? Am I with lowly, loving zeal asking how I can best give Him welcome? Am I ready, if need be, to part with all, that I may have room to receive the one Guest? He comes not among careless merry-makers or eager worldlings. What if I let these take up all my thought and time? What if I can spare no word for Him, and leave no room for Him in mind or heart, so that He must pass by? What if Christmas bring me no new gift of Jesus' presence? I am unworthy that He should come under my roof. But He is lowly. If I will long for Him, and open the door of my heart, cold and hard though it be, He will glorify me, as he glorified the stable and the manger.



THE CHILDREN'S CORNER.



DEAR CHILDREN,—  
I had better  
Send you now a warning letter,  
For if Jack Frost should happen to be late,  
And if it's stormy weather,  
Though he's just as tough as leather—  
Poor old Santa Claus might quite forget the date.  
I was in his shop last winter,  
And he looked just like a splinter,  
For his jolly face was long and full of woe;  
And he said, "I feel so weary  
For it's very dark and dreary  
When we've rain at Christmas time instead of snow."  
And he limped about so sadly,  
"I've the rheumatism badly,"  
He marked, "and I've such a lot to do.  
Would the children mind, I wonder,  
If next Christmas I should blunder,  
For I fear it will be warm and rainy too."  
But I'm sure that he was joking,  
For his reindeer he was stroking,  
And with toys he was piling up his sleigh.  
And he loves the children dearly,  
So, although he acted queerly,  
He is certain to remember Christmas Day.  
Why, Old Santa thinks it's shocking  
To forget one little stocking,  
And could anyone be jollier than he?  
Now, if you would learn the reason  
That he loves the Christmas season,  
Just copy him for once and you will see.  
For the greatest joy of living  
Is in loving and in giving.  
Like these children who are creeping down the stair  
With a Christmas box for "mother,"  
And for "daddy dear" another—  
When they see them in the morning won't they stare!  
And if you can turn the sadness  
Of poor little ones to gladness,  
Fill their stockings up with candies and with toys.  
Play old Santa Claus this season,  
Then you'll surely know the reason  
Why the dear old fellow Christmas-time enjoys.  
May you all obtain full measure  
Of this truest Christmas pleasure.  
And, dear children, spare one little thought for me:  
On your letters I'm depending.  
All good Christmas wishes sending  
To your loving friend and cousin—  
DOROTHY.

Something New.

On the last evening of the old year Nelly and Tommy were to be allowed to sit up to see the new year in. It was 11 o'clock, and they were getting uncommonly sleepy. As they gazed sleepily into the fire, suddenly a spark flew out upon the hearth, and grew and grew until it became a pretty little fairy dressed in red, with a mantle of blue flame, a crown of tiny sparks, and a wand made of a glowing twig.  
"What do you want with me," said the fire fairy, "that you keep staring into my home?"  
The children were not a bit frightened; they had had many dealings with fairies.  
"Well, you are a new one at least," Tommy remarked with approval.  
"New!" exclaimed the fairy, indignantly. "I am older than the world you live on."  
"New to us, he means," explained Nelly, who was more polite than her brother. "We are rather tired of the fairies and brownies we see and hear about. We have been to Fairyland, and to Toyland, and to Catland, and we want to go somewhere new. As you are a new fairy, perhaps you will take us to a new sort of country?"  
"I don't think you would like Fireland," said the fairy; "you might find it a little too warm."  
"Perhaps we should," replied Tommy. "Do you never travel into other countries?"  
"Oh, yes," said the fairy; "but it is raining out of doors, and I don't like rain. It puts me out."  
"There's papa's big umbrella in the hall," said Tommy; "we can all three go under that, and you can keep in the middle, my Lady Spark, and we won't come too near you for fear of taking fire."  
"Now, you don't suppose I am going to walk under this umbrella," said the fire fairy, when once they were out of doors. "Umbrella and I know a better way of going, don't we, Umbrella? Hold hard, children, and we will fly to Umbrellaland."  
There came a gust of wind, and up went the umbrella, taking the children with it. As for the fire fairy, she had gone out.

Suddenly the umbrella came down to the ground with a jerk and began to talk.  
"Get away," it said, crossly, "and let me furl up. Don't you see I've got home?"  
Down came the dripping top upon the children, who were glad to escape from under it. The umbrella then leant, as if exhausted, against a stand.  
"Why, this is a whole city of umbrella stands!" exclaimed Nelly.  
"What else could you expect, in Umbrella country?" asked Tommy. "I say, Umbrella; why, bother it, our Umbrella's gone to sleep!"  
"Are we never to have any sleep, pray?" asked an indignant voice. It proceeded from an umbrella, who was taking a constitutional, arm in arm with a walking-stick. "Let me introduce my friend, Hookey Walker," it proceeded. "We live in the same stand, and the wretch who bought us, and therefore imagines that we belong to him, will never take us out for a walk together."  
"But he couldn't take you both in one hand," said Nelly.  
"As if he hadn't got two hands! You are driven hard for an excuse," retorted the Umbrella; "and then the selfishness of protecting himself at my expense from the rain!"  
"I thought that was what you were for," said Tommy.

The Umbrella turned away in disgust.  
"If those are your views and opinions," he replied, "I wish you a very good evening. To be sure, you are only children, and here come some of our own children, who may be able to talk down to your level," and he pointed to two pretty little parasols, one blue and one white, which came lightly dancing towards them.  
"Good evening," said Nelly, now certain that one must be civil to things in their own country. "Do you like walking?"  
"We prefer flying," said the white parasol; "will you come for a fly with us?"  
"Can you take us to another country?" asked Tommy; "we are a little tired of Umbr—" Nelly stopped his mouth.  
"He means we are afraid of disturbing the umbrellas and parasols that have gone to sleep," she answered politely.  
"I will take you to Tabledland if you will hold on to me," said the blue parasol. "I know a very kind supper-table which is never so happy as when people are sitting round it. Hold hard."

[TO BE CONTINUED.]

Christmas Notes.

"Christians, awake; salute the joyous morn,  
On which the Saviour of the World was born."  
Bright and glorious the whole earth seems at Christmas-tide, especially in the city, where the stores are ablaze with decorations, and the display of Christmas goods (in spite of "hard times") eclipses all previous records.  
Toys there are of every kind, books in brilliant binding, novelties that puzzle one's brain to imagine for what purpose they are intended, candy lilliputians, costly furs, jewelry, and Christmas cards, side by side in beautiful array.  
To many the pleasure of the season is lost in hopeless worry to make a limited allowance buy an unlimited amount of expensive presents.  
Besides cards and calendars, there are many dainty little articles to be had for five, ten, and fifteen cents, such as celluloid photo frames and boxes, fancy handkerchiefs, stick-pins, and those bright hat-pins so fashionable just now.  
In sterling silver, hat-pins, stick-pins, veil-fasteners, thimbles, buttonhooks, pencils, penholders, bouquet holders, book markers, paper knives, etc., cost from twenty-five to fifty cents. These prices seem particularly adapted to us country people, but I prefer those simple homemade gifts such as linen photo frames embroidered with washing silk, crocheted table mats and doilies. As it is rather late in the season for the above, I will describe two or three little things easily and quickly made. Three-quarters of a yard of elastic (same on both sides), one yard of baby ribbon, and six brass rings about three-quarters of an inch in diameter will make a pretty pair of garters: cover the rings with silk thread in button-hole or crocheted, and sew two of them to one end of the elastic (which has of course been cut in two); then take the other end, put through the two rings from beneath, turn backward over one ring and under the other, fastening the end to another ring; put on two tiny bows of the ribbon, and one garter is complete, adjustable to any size.  
A wine tumbler covered with crocheted silk or fancy cotton thread in any simple pattern and suspended by ribbon from a hanging-lamp makes an excellent receptacle for burnt matches.  
In presenting gifts, whether cheap or costly, always do them up in holiday attire, wrapped in tissue paper, and tied with ribbon, or even fresh, colored string. The most insignificant present will look inviting and attractive.  
Just a word about the fashions: Those long, comfortable Newmarket coats are again in vogue, and nothing is more convenient to the farmer's wife and daughter.  
Aberdeen caps of gray lamb, with plush crown, and jaunty wing at the side, are the prettiest and most suitable headgear for country ladies. Sailors and fedoras, such as we have been wearing the past and present winter, are stylish and becoming for fall and spring, or for mild days in winter. Nothing looks more disreputable than a huge picture hat,

drooping sadly, with a lot of straightened feathers dangling over the brim! For those who can afford to have them trimmed and retrimmed they are all very well, but a sailor will cost less and look fresher at the end of the season. Green is the predominating shade in millinery, but red comes in for a full share of favor. In dress goods, plaids are with us again; smooth goods are the most worn now, and combinations of purple and black, or violet and green, are much worn. For very little girls bright red coats and hoods are still strongly in evidence.  
And now, good people, hoping these few hints may be of some use to you, I wish you each and all a very merry Christmas and a happy and prosperous New Year.  
HOPE HAMPTON.

Puzzles.

All matter for this department should be addressed to Miss Ada Armand, Pakenham, Ontario. Answers must accompany original puzzles, which should be written with ink on one side only of paper.

1-CHARADE

My first is part of the body.  
My second is a river in Italy.  
My third is a utensil.  
My fourth is a vowel.  
My fifth is an abbreviation for music.  
My whole is a large animal.

MAGGIE SCOTT.

2-CENTRAL ACROSTIC.

1. An evergreen shrub.  
2. Part of the body.  
3. A musical instrument.  
4. Something puzzling have.  
5. A vehicle.  
6. A color.

The words are composed of five letters each, and when read downward the centrals will form a fruit.

MAGGIE SCOTT.

3-A COLLECTION OF FRUIT.

A fruit that you have in your throat or your eye.  
I hardly know why.  
The fruit that though single will always be two  
(Phonetic, 'tis true).  
This stands for contempt, or slight value, I'm told.  
In cant phrase of old.  
But that one is worth half a million of dollars,  
Say competent scholars.  
A county of Southern New York you may find,  
Distinctly outlined.  
A fruit that the sins of its friends will disclose,  
And tell all it knows.  
The fruit that all plasterers highly must prize;  
Whitewashers, likewise.  
A fruit that from cannon has often been fired,  
And men have expired.  
The fruit that cuts down; this should certainly be  
George Washington's tree.  
This last is composed of a fish and a plant,  
But eat it, I can't.

"OGMA."

4-SQUARE WORD.

1. A king of Scotland.  
2. Loss of the power of speaking.  
3. Having a lower price.  
4. Amphibious rodents valued for their fur.  
5. To arraign.  
6. The male of the peregrine falcon.  
7. Roughly.

"OGMA."

5-DROP VOWEL.

N-pl-s-r-se-mp-r-bl-t-th-st-nd-og  
p-nth-v-nt-g-gr-nd-ft-r-th.

MURIEL E. DAY.

6-NUMERICAL.

2, 3, 4 is an insect.  
4, 5, 6, 7 is a kind of tube.  
6-10 helps to raise weights.  
1, 2, 4 is an animal.

Whole a projection for supporting weights.

"KIT."

7-TRANSPPOSITION.

Gylin's a nitareo kame fo ecodowear  
Dan knew het getonu tesgro sti ythones  
Hte tearh dan nadh yam oprd eht tonsicufn oto  
Adn ghtinno ythrow eb vreesdol ro endo.

EDITH BROWN.

8-NUMERICAL ENIGMA.

My 10, 3, 9 is a part of the body.  
My 9, 3, 7 is something good to eat.  
My 4, 5, 11, 6 is something placed.  
My 8, 3, 1 is a part of the mouth.  
My 2, 12, 11, 4 is something frozen.  
My whole is a place in the United States.

EDITH BROWN.

9-ILLUSTRATED REBUS.



LILY DAY.

10-SQUARE WORD.

1. A popular game.  
2. Having ears.  
3. A celebrated law-giver.  
4. To resort.  
5. Perfumes.

BLANCHE MACMURRAY.

Answers to Nov. 15th Puzzles.

1-Cloud-loud-duo-do-o. 2-Asparagus.  
3-Friendship closes its eyes rather than see the moon eclipsed; while malice denies that it is ever at the full.

8	1	16	9
15	14	3	2
5	12	4	13
6	7	11	10

This may also be done in other forms, so that any who got the proper count will be credited.—A. A.

7-Indiscretions.  
8-Hypocrisy is a sort of homage that vice pays to virtue.  
9-Teacher.



5- I D L E  
D O E S  
L E A P  
E S P Y

6- B E A C H  
E X T R A  
A T L A S  
C R A F T  
H A S T E

10—Sow love and taste its fruitage pure,  
Sow peace and reap its harvest bright;  
Sow sunbeams in the rock and moor,  
And find a harvest home of light.

SOLVERS TO NOV. 15TH PUZZLES.

Maggie Scott, Annie P. Hampton, "Kit," G. J. McCormac, Chris McKenzie, Edith Brown, Mabel Ross; also "Kit," and Annie Hampton, for Nov. 1.

COUSINLY CHAT.

"Vic."—One of the things to be observed in sending original puzzles is that the answers must accompany them. Yours seems excellent, but could not be used because you omitted the answer. Why did you not send in the answers you had to the other puzzles? Let us hear from you again, "Vic."

"Ogma."—You are a welcome addition to our Corner, "Ogma," but don't be too hard on the little cousins; four word squares are too easy, but seven word squares are rather hard. Hope you will continue to contribute and solve as well.

Chris.—Good girl! Hope you come to stay. I wish Clara R. were back.

"Margareta."—Jolly girl you are. I've had sleigh drives, too. It's rather late for what you suggest, but thank you for being interested. Am always glad to receive any suggestions that will brighten our Corner.

"Lily."—Thank you for your promptness. Sent work off as soon as possible, and hope it may appear in this issue. What's the matter with M—?

"Essex."—Where, oh where, is the promised puzzle for Xmas? "Annie Laurie" is—I'll tell you some other time; when you call to see your country cousin, perhaps.

"Nesta."—I know a little girl who gets—(what shall I say?) tired sometimes. Do you?

Mab.—Your puzzles are rather easy. Try again, girlie.

DEAR COUSINS,—Now that we are about to begin a new year, shall we not try to improve our already pleasant Corner? Anyone who can suggest any novel features will confer a favor on Uncle Tom and your cousin by being kind enough to do so. Thanking you for your kindly greetings, and wishing you all a Merry Xmas and full stockings—  
ADA A.

The People we Meet and their Advantages in Country Places.

The busy season on most farms is usually over when the ground begins to freeze and everything in general presents a wintry appearance. Though there are frequently many duties to occupy the attention of those living in the country throughout the winter, time is not so limited that some part of the day or evening may not be spent in improving the mind. People who have been reared in the country can very readily develop the intellectual powers if advantage is taken of the opportunities placed within reach. It does not follow, however, that all country people have their mental powers fully developed, but in justice to farmers we may remark that some of the townspeople are just as deficient, perhaps more so, in regard to mental cultivation, as their country cousins. In almost every country the inhabitants are divided into the upper, middle, and lower classes, and nearly every profession has its three classes. This is especially true of those engaged in agricultural pursuits. They may not be divided in the same manner as the entire population, but nevertheless the careful observer will find three distinct classes. One class is composed of those who profess to be plain, practical men, who are not often interested in any other business. Many of them have been engaged in farming all their lives and the knowledge gained has all been the outcome of practical experience. In many cases they have followed the same system in every detail as their fathers did fifty years ago, and all they desire is that their family should follow in the same steps. Those people seldom have either time or wish to read an agricultural paper. If they take a local newspaper that is considered sufficient to keep the household informed on all matters of interest. To use a common expression, they discuss "shop" all the year round, in season and out of season. Their sole aim is to raise more corn, to feed more hogs, to make more money, to buy more land, in order that they may have the satisfaction of leaving a good fortune for the next generation. It cannot be said that this is a selfish motive, but it is no excuse for any person, be he farmer, merchant, or professional man, for starving the minds of his family in order to leave them rich in lands, gold, or any other perishable property. Another class comprises those who are engaged in the business not because they have any love for it, but merely to have some occupation from which they may derive the necessities of life. It is a matter for congratulation that farmers of this class are "few and far between" in this country. However, as no hive is without its drones, so no country is entirely free from men who are continually retarding its progress. These "drones" usually know the condition of every farm and farmer in the neighborhood. When several of these "familiar spirits" meet, the doings of the past decade are often the principal topic. In the words of the poet:

"Where village statesmen talked with looks profound,  
And news much older than them all went round."

They frequent the local markets, but seldom have any business to transact. Public sales are never complete without their presence. They take considerable interest in political affairs, knowing just how to work every doubtful voter in the Ward on election day. As they think they know everything about their own business, they never study to obtain information. If a vacancy occurs in any public office they are anxious to offer them-

selves as candidates in order to prevent the appointment of an unsuitable person. The majority of this class have found the climate of this country does not agree with them, and consequently they have contributed to the numbers who emigrated to foreign countries during the past decade. There may they long remain! One of the social problems which has frequently been discussed of late years is the slow progress made in populating this country. The reason may be accounted for by the fact that with few exceptions the most desirable class of citizens are settling in the rural districts. These, added to the number who remained after the late exodus (which, by the way, ceased with the advent of more prosperous times), will be the means of making this country a model for others to imitate. These people are often called "theorists," simply because they never do anything without a reason. They do not, as a rule, represent the wealth of the agriculturists, as their whole time is not devoted to moneymaking; but if they have not become rich in gold they have at least stored their minds with useful knowledge, while at the same time they have taken an active interest in the welfare of the country in general. Instead of finding fault with the actions of others, and especially with the Government, they endeavor to make the best use of the opportunities afforded them. In short, they are in a position to meet those of other trades and professions as equals. Our system of education, though it may have defects, has been a chief feature in producing such satisfactory results. Horace Greely says: "A good practical education, including a good trade, is a better outfit for a youth than a grand estate, with the drawback of an empty mind. The one structure that no neighborhood can afford to do without is the schoolhouse. A small library of well-selected books in his home has saved many a youth from wandering into the baleful ways of the prodigal son."

It is generally believed that people residing in the country have not the same advantages as city people for acquiring a taste for literature. In some respects this is true, but it must not be overlooked that amid so many attractions much time is spent in amusement. Young people especially find so much to occupy them that very little time is devoted to their mental, moral or physical improvement. The authorities of a number of cities, even in this country, have resorted to the practice of ringing the "Curfew bell" in order to prevent children from remaining in the streets till midnight, thinking that if they are trained to spend their evenings at home when puny they will not be so likely to waste valuable time in after years. The experiment has not so far proved very satisfactory. On the other hand, residents of country districts, who often sigh for the social life of cities, may congratulate themselves that in their young days temptations of this nature were not within reach. Who ever heard of a Curfew bell in the country? Is it customary to see young people, or, indeed, people of any age, residing in the country, arraigned before police magistrates charged with breaking the laws or disturbing the peace of the community? There may be exceptional cases of this kind, but they are undoubtedly much more frequent in cities, where temptations of every nature are so strong. One of the greatest disadvantages of country life is that it is difficult for people to meet together frequently. There is, however, one advantage in this. Every person requires something to interest him during leisure hours, and choice books, magazines and other reading matter are considered a luxury. This way of spending spare time is always certain to produce good effects. The winter evenings might be spent even more profitably if mutual benefit societies were less uncommon. Where it is possible to form literary societies or any such associations in school sections the schoolhouse might be converted into a place where grown-up people as well as children would receive a benefit. A library could be maintained at a moderate cost, where members could procure books and periodicals much cheaper than is possible in private libraries. If this question is considered carefully at this season and such societies formed (as there are now in several places) they would not soon fall into decay, and they would create a desire to gain information which would add materially to the comfort and prosperity of the inhabitants of rural districts. J. F.

Good Darcy Stories.

A Georgia man who had made a flying machine offered a negro \$10 to make a trial trip in it.

The negro agreed, got in position, and he and the machine were hoisted by block and tackle about 30 feet from terra firma.

When the rope was loosened the machine took a sudden slanting course toward earth and plunged into an adjacent millpond.

It disappeared with the negro beneath the water, while the terrified inventor stood shrieking for assistance.

Presently the negro's head bobbed up serenely, and he struck out for dry land. On arriving, his first spluttered words were:

"In de name of God, Marse John, why didn't you tell dat fool thing whar ter 'light?"

An old darcy, being informed that a member of his race had forged a note on a bank, exclaimed:

"Dat's what comes er eddication. I got ten chillum, but, thank de Lawd, not one er dem kin read er write."

The Afridis.

AN EX-INDIAN OFFICER'S EXPERIENCE WITH THE FRONTIER RACE IN THE PUNJAB.

As Inspector of Forests, I got to know the Punjab pretty well, particularly on its northern border, and the neighboring Afridis. I came in contact with lots of them in a quite unofficial capacity, and the first conviction I came to about your Afridi is that he is a born fighter—and isn't he splendidly adapted to it?

Then, next to a fighter, your Afridi is a born thief and liar. These two accomplishments run together among Orientals. Thieving is a recognized occupation among them, and lying follows quite as a natural consequence. From preference they steal from a stranger; if a stranger is not at hand to be robbed they will steal from even their own relations. The main thing is that something must be stolen, so steal from your brother *faute de mieux*. And they are so frank and open with it all. Why, I remember going on a tour of inspection with C—; of course, we went on horseback, taking two mounts each. Now, C— had a very favorite ambling pony, an especially useful animal, which he prized highly, a sort of spotted piebald which we will call Pudding. Well, we camped our first night one day's ride from Peshawur. In the morning C—'s servant informed him that "the Sahib surely could not journey that day." "And why not?" "Well, chiefly that the Sahib's horses had been stolen in the night." Now, there was an Afridi trader who used regularly to visit C— when coming to Peshawur, until they became thoroughly good friends. And a very good fellow this Afridi was, but a known horse-stealer. C— had been with him in Peshawur the day we started. Coupling this fact with the disappearance of the cattle, we had no doubt that C—'s friend had stolen the horses. C— immediately sent this individual a friendly message asking him to come down and see him at once, which he did. C—'s first remark, that it was rather too much to steal the horses of a man with whom he was on the friendliest terms, was answered with sympathetic acquiescence, "that it was hard, but what could be done?" And a look accompanied the remark which as much as said, "Horses must be stolen." "Yes, but from your friend?" pleaded C—, who long and earnestly urged for the return of his horses, and pointed out his present dilemma, unable without horses to go backward or forward. Well, in the end, after C— had laid down the whole duties, and a little over, of friendship with an eloquence that his most intimate friends never suspected him of, the Afridi said that as C— was his friend, his very dear friend, he would stretch a point from his usual procedure and return Pudding, but he would really be obliged to ask a very high price for the other horse. Which had to be paid before the journey could be continued, and without any breach in the relations of these two, though C— was afterwards a little more careful with his property when receiving a visit from his very dear friend.

But in some respects they have a highly developed sense of honor. For instance, suppose one Afridi borrows a sum of money say, £5, from another, the lender will give him a slip of paper with the loan written out on it, just a reminder that he had borrowed that sum. Well, supposing the borrower dies before his debt is repaid, his family, finding this paper, with the amount of the loan and the lender's name, will pay the total sum to the lender, although the latter may be totally unknown to them, and without the slightest doubt as to the genuineness of the debt. This shows a sense of honor in money-lending matters to which it would be hard to find a parallel at home just now.

And in another way they look upon it as a strict moral obligation to avenge any insult or injury done to themselves or their family, and as this vengeance generally ends in the death of one of the parties, no cost is so great as to prevent its being carried out.—*Pall Mall Gazette.*

A Sunday School Surprise.



1. Teacher—Well, children, Christmas is approaching, and I guess by next Sunday I can state something definite about the usual Christmas presents you will each receive.



2. The next Sunday.

The two above pictures tell a true Christmas story which will be appreciated by many of our readers.



**A Lobster's Toilet.**

HOW HE GETS OUT OF HIS OLD SHELL AND TAKES ON A NEW ONE.

It has not happened to every one to see a lobster cast his shell. Last summer I had an opportunity of watching the process. I was staying for several weeks in a secluded little village on the south coast, and one day, when the only fisherman in the place returned after taking his "pots," he flung upon the beach a specimen too small for sale or home consumption. The prize was taken possession of by a boy, who presented it to my improvised aquarium, for which all the little boys of the village were enthusiastic collectors. I kept the water well aerated, and devoted a great deal of time and attention to my various live stock; and at last my reward came. At the time of his capture my lobster had already begun to think about getting a new suit, and as the days went by, the old shell became so small for him that he could no longer avoid discarding his ever-tightening armor. One morning, therefore, I found my lobster apparently in his last agonies. He lay on his back and rubbed his legs convulsively together as if in intense pain; and then he wriggled about, or jerked himself violently upward by means of his tail. I suppose that these actions had for their object the loosening of the claws and the limbs in their sheaths. The rapid movements somewhat disturbed the sand and clouded the water; but as the patient lay close to the grass, I never entirely lost sight of him. Nevertheless, I do not quite know how it all occurred. The throes continued for an hour or more, and efforts were apparently made to burst the shell open from within; but it was not until I saw the lobster had actually divested himself of his head-covering that I understood what my guest was about. A great deal more wriggling and struggling followed, the lobster gradually squeezing himself, as it were, out of the shoulders of his suit of armor.

The operation looked as if it were extremely painful and exhausting; but at last I had the satisfac-

tion of seeing my lobster and his discarded shell lying side by side. The latter looked much the smaller, and if the headpiece had not been motionless it might have been mistaken for a live and healthy crustacean in full dress. The orifice through which the ancient tenant had evicted himself was very small, and the headpiece had not yet been completely thrown off, but was hanging, as by a hinge. But now the naked lobster did not look at all like his old self. His colors were so bright as to suggest that he had been parboiled, and he had the tender appearance of human flesh from which the skin had just been removed. I took out the shell and found that my guest had got rid not only of the major part of his eyes, but also the lining of his stomach, including his internal teeth, and of some of the bones of his thorax; yet he seemed to be little the worse for his thorough turnout. On my return from luncheon I touched him and found that, although quite soft, he was covered with an incipient shell of the approximate solidity of oiled tissue paper.—*Fireside.*

**"Nagging" Men.**

A few months ago a doctor wrote some articles on "Nagging Women." He related his experience as a physician, and declared that a large share of human misery was clearly the result of women's pestilent and persistent "nagging" of those about them.

But what about "nagging" men? There are men whose nightly return to their homes always means needless misery to their households. They find fault with their dinners, with the household bills, with the children, and with everything else. They make sarcastic remarks that burn and scarify the sensitive souls of their wives. They carry home the worries of business. They "take it out" of their families for everything that has gone wrong in the day's work, and some are even cowards enough to revenge upon the innocent and helpless those wrongs and affronts which they have not had courage enough to resist and resent upon the offender.

There are probably as many "nagging" men as "nagging" women in the world, and there is immeasurably less excuse for them. For men have the relief of work and out-of-door life for irritable nerves, and that is denied to most women.—*Edinburgh Scotsman.*

**Shillelah Manufacture.**

The shillelah industry, or the making of blackthorn sticks, is becoming quite prosperous in Ireland. Happily, the shillelahs are not now intended—as in the days of Donnybrook Fair—for cracking skulls, as may be imagined when we mention that the Duke of York returned from Ireland with one hundred of them to present to his friends. One of the most industrious makers of these sticks is an old Crimean soldier who lives in a village in Connemara. Hearing that the Queen suffered from rheumatism, he sent Her Majesty an exceedingly fine blackthorn crutch stick, with a letter guaranteeing it to be one of the finest and strongest in Ireland. He has now hanging in his little shop a framed letter of thanks and a portrait of the Queen, which were sent him by order of Her Majesty.—*Westminster Gazette.*

A clergyman was very anxious to introduce some hymn books into the church, and arranged with his clerk that the latter was to give out the notice immediately after the sermon. The clerk, however, had a notice of his own with reference to the baptism of infants to give out; accordingly, at the close of the sermon, he arose and announced that "All those who have children whom they wish to have baptized please send in their names at once to the clerk." The clergyman, who was stone deaf, assumed that the clerk was giving out the hymn-book notice, and immediately arose and said: "And I should say, for the benefit of those who haven't any, that they may be obtained of the vestry any day from 3 to 4 o'clock; the ordinary little ones at one shilling each, and special ones with red backs at one shilling and four pence."

**PUREST AND BEST.**

**Windsor Salt....**

Is not surpassed by any salt manufactured; try it and you will use no other.

.....

TABLE SALT,  
BUTTER SALT,  
CHEESE SALT,  
ORDINARY FINE SALT.

Packages of best quality.

.....

**WINDSOR SALT CO.,**  
LIMITED,  
Windsor, Ontario.

**FOR SALE!**

**25 CLYDESDALE STALLIONS and MARES.**

Nearly all prize-winners at Toronto, Montreal, Ottawa, and Chicago World's Fair. Most of our young stock raised by the Columbian champion, Prince Patrick, and Grandeur (sweepstakes four times at Toronto). Two of our fillies are daughters of Lillie Macgregor, the champion World's Fair mare. Also a number of Hackneys. Also Ayrshire bull and heifer calves, and Shropshire sheep. 62-year-old.

**D. & O. SORBY, Guelph, Ontario.**

**BREEDERS OF HEAVY DRAFT STOCK.**

**FOR SALE!**

A few well-bred heavy Clyde and Shire mares, 1600 to 1750 lbs., suitable to work a farm and raise a heavy draft colt.

**HENDRIE & CO. (Limited),**  
on TORONTO, ONTARIO.

**F. BONNYCASTLE & SONS,**  
CAMPBELLFORD, ONT.,  
Breeders of Shorthorns, Cotswolds, and Berkshires. Have for sale cows, heifers and heifer calves; also some choice Berkshire pigs. May and October litters at very low prices.

**1855 TO 1897**

**Willow Bank Stock Farm**

One of the oldest-established herds of SHORTHORNS in the province, has for sale a number of young bulls and heifers got by Isabella's Heir = 19550 =. Also young cows of grand milking families.

**JAMES DOUGLAS, Caledonia, Ont.**

**...FITZGERALD BROS....**

Mount St. Louis, Ont., Breeders of pure shorthorn cattle, the descendants of Crookshank and other noted breeds, and Cotswold sheep. We are now offering a bunch of strong and strongly-bred young females, at reasonable prices.

**E. JEFF & SONS, BONDHEAD, ONT.**  
BREEDERS OF Shorthorn Cattle, Southdown Sheep, and Berkshire Pigs.  
At present we are offering some choice young Southdowns and Berkshires.

**SHORTHORNS**

Bulls and heifers, having gilt-edge pedigrees, and of superior quality.

**C. A. BRODIE, Bethesda P. O., Ont.**

**FOR SALE.**—Two registered BERKSHIRE BOARS; also one SHORT-HORN BULL CALF, nine months old, and some choice HEIFERS.

**F. A. Gardner, BRITANNIA, PEEL COUNTY, ONT.**

**PAINTING WITH A PUMP.**

**THE SPRAMOTOR. WHAT IS IT?**  
It is a machine invented and designed to spray trees, but has proved to be the best apparatus known to do PAINTING, WHITE-WASHING and CEMENT COVERING of buildings, as well as spraying.

It has been awarded FIRST PLACE at the Government spraying contest, at Grimsby, in actual trial against the best in the U. S. and Canada. Two Bronze Medals and two Silver Medals at Toronto and London, 1896-7, and Ten Diplomas. It has been used for three years by the Ontario Government for experimental spraying throughout Ontario. Over 1,000 in constant use.

**CERTIFICATE OF OFFICIAL AWARD.**  
This is to certify that at the contest of spraying apparatus, held at Grimsby, on April 2nd and 3rd, 1896, 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. Hill*  
*W. J. Hill*  
JUDGES.

**AGENTS WANTED.**—Send for terms and prices. Send 3c. stamp for 68-page treatise on the diseases affecting fruit trees and their remedies. Mention this paper.

**SPRAMOTOR CO.,**  
357 Richmond St., LONDON, ONT.

**OAK PARK STOCK FARM'S SHORTHORN HERD**

Your choice from 50 head, including cows and heifers having the most approved pedigrees. Half a dozen young bulls equally well bred. Registered Shropshire sheep and Berkshire swine.

**CAPT. D. MILLOY,**  
Paris, Brant Co., Ont.

**Ayrshires, Tamworths & Chesters.**

**T. BROOKS & SONS,**  
Brantford, Ontario.  
Offer two yearling heifers and two heifer calves, by Sunrise 1074; one fifteen-months Tamworth boar, King George 676, and a litter of Chesters ready for shipment.

**Samuel Dunlop, Eady P. O., Ont.,**  
Breeder of pure-bred Shorthorn cattle and Poland-China pigs. Am now offering half a dozen young heifers for sale from deep-milking dams.

**H. K. Fairbairn, Theford, Ont.,**  
Offers for sale his yearling bull, winner of second prize at the recent Western Fair; sure and quiet. Also three yearling heifers fit to breed this fall.

**The Daisy Grain Grinder**

HAS NO EQUAL.



Suitable for all purposes; made in 4 sizes, using 8 inch, and 10 and 12 inch reversible plates. Fitted with ball bearings and relief springs. By a simple lever attachment the plates may be instantly separated and brought together again while in motion. Elevator and bagger added when desired. Manufactured only by

**THE WORTMAN & WARD MFG. CO.,**  
LIMITED,  
LONDON, ONTARIO.  
Write for descriptive circular and implement catalogue before purchasing any other.

**THOS. ALLIN & BROS.**  
LAKE VIEW FARM, OSHAWA, ONT.,  
Breeders of SHORT-HORN Cattle and SHROPSHIRE Sheep. 2 choice young bulls now for sale, also a few choicely-bred cows and heifers. Hard-time prices. Correspondence solicited.

**MAPLE LODGE STOCK FARM.**  
ESTABLISHED 1854.  
Choice Shorthorn bulls and heifers for sale now of the very best quality and breeding. Both milk and beef standard. Can still spare a few Leicesters.

**A. W. SMITH,**  
MAPLE LODGE P. O., ONTARIO.

**H. I. Elliott,**  
Breeder of Scotch Shorthorns and Southdown Sheep

Young stock for sale. Par. Coch in cockrels for sale from prize-winning stock. RIVER VIEW FARM, Danville, Que.

**ADVERTISE IN THE ADVOCATE**



## The Story of the Bells.

TO the most indifferent observer the approach to Guelph is heralded by a sight of the imposing buildings of the Bell Organ and Piano Company, and to speak of Guelph without mention of the name of Bell is much like attempting to portray *Hamlet* with the chief character omitted.

The importance of the establishments of the Bell Organ and Piano Company to the city of Guelph cannot be overestimated. It is by all odds the chief institution in our county, and upon its success depends the happiness and welfare of many hundreds of people. It is the chief artery through which the current of life passes among us, and its value as a central point for the production and the dissemination of money among our people cannot be too highly regarded. And we must also bear in mind in reflecting upon its importance to our welfare that it has created a name for artistic and æsthetic taste by its constant devotion to all that is architecturally elegant and musically refined in the manufacture of instruments of the highest order of excellence. This is a point which may be lost sight of in the near prospective in which we live, but in foreign countries this feature of its successful career is frankly recognized and applauded.

The history of the renowned Bell industries is equivalent to a reproduction of our existence and growth, for this city and the name of Bell are so closely commingled that no analysis can separate them. We can scarcely view them except as a synthetic entity. They may be regarded as in a measure interdependent and mutually reliant. To be sure the Bell Company does not exist by force of local conditions, for its welfare is drawn from places which are scattered all over the world, while, on the other hand, much of the comfort, happiness and prosperity local to this vicinity depend very largely, and in many instances almost entirely, upon the hum of industry which comes from the whirling wheels, rushing bands and keen edged machines resounding year after year within the building's stately walls.

It has been many times told, but may well bear repetition, how the present business was established in the year 1864. At its commencement three men worked industriously to produce one per week of the now antique melodeon which stood in the "best parlor" of the well-to-do, like a four-legged beetle with polished back and sides. We say "well-to-do" advisedly, for in those days the now venerable melodeon was an expensive affair, as compared with the prices

asked in our day for instruments so far superior that no analogy can be found between them any more than between the modern pneumatic bicycles and the clumsy carts of the early Britons. The melodeon, ungraceful as it was in appearance and limited in musical features, was the pioneer, and on those same four legs the original proprietor opened his small factory. About the same time many others started the same business whose names are now lost in oblivion, but in the founder of the Bell business a careful, methodical and energetic man was at work, and under his supervision this work prospered. He knew what the people would want and knew how to make it for them.

The result was a steadily increasing demand which in more than thirty years of manufacturing has never yet been satisfied, for the indents for Bell Organs come from all parts of the world. A recent chat with one of the Company's officials revealed the fact that weekly shipments are made to Europe, South Africa, South America, New Zealand and Australia, and constant consignments to every part of our own Dominion. And it may be interesting to our readers to know that the Bell Organs of the more imposing and elegant styles have been supplied to the palaces of Her Majesty the Queen, the Empress Frederick, the King of Italy, the King of Spain, the Queen of the Netherlands, and many other of the Royal families of Europe; and one has been acquired by the Sultan of Turkey, who doubtless finds pleasure in its alluring tones after a hard day with the Eastern questions which trouble his peace of mind so continuously.

Figures are dry reading and often fail to convey to the average reader any meaning beyond a series of complicated and puzzling pictures. When one of our fair subscribers is told that the lumber yards of the Bell Organ and Piano Company contain something approaching three millions of feet of wood, what impression can it convey? A sum of such magnitude is appalling, and it is more interesting to her to know when looking at the lumber yard from the train in which she comfortably sits that before her eyes is spread material for making twenty-five thousand pianos or organs. That conveys a meaning to her and may have a passing interest to her thoughts.

In a like manner one unaccustomed to factory discipline, routine and operation can gain some interest in reading that large engines of hundreds of horse power are driving countless belts, pulleys and wheels, in many rooms and on many different floors. For this is the case, and hundreds of expert artisans spend the greater part of their waking hours in carrying towards perfection the multiplicity of details which play important parts in the Bell pianos or organs.

In an article such as this a tabulation of dry-bone statistics would be uninviting and should be relegated to technical journals, in which it may find a fitting place. And this is more especially the case since the industries carried on in the Bell factories have been described in minutæ by other pens. In a popular sketch of this kind we think they have no place, for we are chatting with our readers and attempting to portray the romantic aspect of our subject. Romantic, do you say? Yes, indeed, for even a mere mechanical industry has its romance and sentiment, and this is particularly the case when treating of musical instruments, about which romance, sentiment and pathos have been wreathed since the ancient days when Jubal blew his first note upon the reed. And speaking of reeds reminds us of the old phrase of "a reed shaken with the wind," which is no doubt familiar to many of our readers. There are millions of reeds being "shaken by the wind" in the Bell Organs in every part of the civilized globe. From the Arctic circle down through the temperate, tropical and southern parallels the Bell Organs are everywhere used, and their reeds are being "shaken by the wind" in every clime.

At the present time there are nearly eighty thousand Bell Organs in existence, and this implies—what? Durability and quality, the two prime requisites in the manufacturing of a fine musical instrument. They are the features that have made the Bell instruments valued wherever they have been sold, and steadily increased their popularity for upwards of two generations. They have been made upon honor and sold upon merit, and this has been from the first the aim of their original maker—to produce the best, only the best, and always the best.

Now this is the line of operations which Mr. Bell laid down many years ago and has conscientiously followed ever since. Every part, whether it belong to a piano or organ, must be of the best. That was the guiding principle when the small business was established in 1864, and has been the guiding spirit of the house from that day to the present.

We remarked in an earlier portion of this sketch that mere numerals conveyed but small conception to the general reader, but here is an illustration which all may understand:

Enough organs and pianos have been manufactured in the Bell factories which, if placed in a line, would reach down the tracks of the Grand Trunk Railway to Toronto, and passing beyond that city would extend in a straight line nearly all the way across Lake Ontario. To carry the parallel out of this country, we may say that these instruments would reach from New York to Philadelphia, or from London to Birmingham, in England.

Nearly one hundred miles of musical instruments! Truly, Canada has reason to be proud of such a commanding industry.

The Bell Company has foreign branch establishments in England, Australia, New Zealand, South Africa, and not less than fifteen in the Dominion in close and intimate relations with the home office in Guelph. We need scarcely comment upon the enormous capital reaching through and supporting these ramifications; but the secret of this strength is told when we learn that the Company possesses a paid-up capital of a sum considerably exceeding a million dollars. In any European country this capital would be regarded as gigantic; in the piano and organ trade of the United States exceptional, but in a comparatively new country like ours it is almost phenomenal. And much is to be said in praise of the minds which first conceived and afterwards developed a business requiring such an enormous sum of money. There are hundreds of substantial and profitable banks with much less capital than is controlled by the Bell Organ and Piano Company.

We have until now refrained from commenting upon a highly important feature of the Bell Company's business—the Piano department. A separate catalogue, devoted exclusively to the Company's pianos, is also published, and will be cheerfully forwarded upon application.

The prospects of the Company were never brighter than at the present time. The new management has laid down plans for developing business, in which they have secured the hearty co-operation of their numerous agents, and a new period of activity is setting in. This illustrated catalogue, prepared in the highest style of the printer's art, depicts the various improvements in case designing, and gives to the reader as full a knowledge of an instrument he may select as if chosen in person at the factory or at any of the Company's branch houses or agencies. It might be added that the capital of the Bell Company is fully equal to, if it does not exceed, the capital of all kindred Canadian industries combined.





## Vegetables

can be raised at a profit, and the yield enlarged, if properly fertilized. Most fertilizers do not contain enough

## Potash.

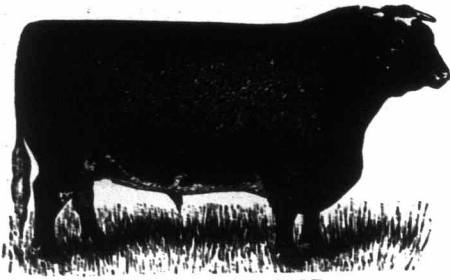
Vegetables need plenty of potash—at least 10%—besides the phosphoric acid and nitrogen.

Write for our books which tell all about fertilizers. They are free.

GERMAN KALI WORKS,  
93 Nassau St., New York.

## Arthur Johnston,

Greenwood P. O. and Telegraph Office,



— OFFERS FOR SALE —

### FIFTEEN SPLENDID YOUNG BULLS.

— ALSO —

### Cows and Heifers,

As good as the old bull ever left.

### Berkshires

OF CHOICEST BREEDING AND QUALITY FOR SALE

Send for Catalogue and prices. "No business, no harm," is our motto. Claremont C. P. R., or Pickering G. T. R.

### Spring Grove Stock Farm



Shorthorn Cattle and Lincoln Sheep. The noted sires, Golden Robe = 20396 = and Nominee = 19628 =, at the head of the herd. Representatives of this herd won two silver medals and the herd prize at Industrial Fair, Toronto, 1897. Prize-winning Lincoln Sheep are also bred at Spring Grove. Stock of all ages and both sexes for sale. Apply **T. E. ROBSON, Ilderton, Ont.**

### Shorthorns and Leicesters

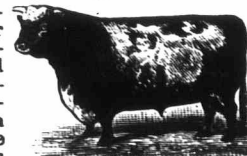
Nominee, sweepstakes bull at Toronto, 1897, bred by us. We also won first prize on pen Leicesters bred and owned by exhibitor. We continue to breed the best.

YOUNG STOCK FOR SALE.

**E. Gaunt & Sons, ST. HELEN'S, ONT.**  
Lucknow Station, G. T. R., 3 miles. om

### FOR SALE! Good Young Cows

two years old, yearlings and heifer calves out of imported and home-bred cows, and the imported bulls, Royal Member and Rantin Robin. Come and see them, or write, if you want something special.



**H. CARGILL & SON,**  
Station on the farm. Cargill Stn. & P.O., Ont.

### W. G. Pettit & Son, FREEMAN, ONTARIO.

Telegraph office, Burlington Station, G. T. R.

### BREEDERS Shorthorns, Shropshires, and Berkshires

Ten choice young bulls from 9 to 12 months, extra good quality, got by "Indian Statesman." A choice lot of yearling ewes (served by an imp. ram), due to lamb in March and April. Also eight young sows, due to farrow in March, and a few boars from four to six months old.

Farms one-half mile and one and one-half from Burlington Station, G. T. R.

### Hawthorn Herd of Deep-Milking Shorthorns

For Sale! FOUR young bulls and several heifers of the choicest breeding and good quality. Prices right. om

**WM. GRAINGER & SON,** Londesbore, Ont.

### ADVERTISE IN ADVOCATE

## GOSSIP.

H. Bennett & Son, St. Williams, Ont., write: "We have a fine herd of Berkshires now on hand. Our young pigs from Bright Star have lots of size and quality, and nearly every pig perfectly marked. Have now a large herd and would part with a good young boar eight months old, and several young sows from five to six months old, at reasonable prices, in order to make room. Sales have been good, and our pigs have given satisfaction. We ship nothing but the best, for we have started breeding Berkshires to stay."

Mr. William Wilson, Brampton, Ont., advertises in this issue two young Shorthorn bulls coming a year old in January. One sired by the imported Kinellar bull, British Statesman 63729 and out of a richly bred cow of Mr. Linton's Sowerby family, from which came many Royal winners, a fine combination of the best Scotch and English blood. The other bull is by British Hero = 21448 =, by imp. Golden Crown, dam Mysie Gem, one of the best Scotch families. These should be worth looking after, and those of our readers requiring such will do well to write Mr. Wilson for particulars.

### THE VALLEY HOME HERD OF SHORTHORNS AND BERKSHIRES.

A short visit through S. J. Pearson & Son's herd at Meadowvale, Ont., repaid us well for the time spent, for we were shown some really good stock, possessing the required up-to-date qualifications—thick, sappy, active and good doers, mostly the progeny of the worthy British Statesman 63729 (imp.), an animal too well and favorably known to require comment, beyond the statement of the fact that he possesses as much vigor and bloom as at any past period in his life. And, to say the least, the progeny of such an animal from such cows as Nonpareil 3974 2425, by Comet; (imp.) Miss Lass, Milt and other equally worthy ones, could scarcely be found amiss under such management as their worthy owners have proven themselves to be. Three choice young bulls and a few females are for sale this season, and in fact the room they occupy is required for the expected ones. The young females in the herd we would not say are hard to beat, but hard to equal, and are in the very finest of vigorous bloom—strong, smooth, evenly-covered animals, in which there can be no mistake made or risk run in their purchase. The Berkshires were founded on Teasdale-bred stock, and the progeny of the noted imported Enterprise, Oxford Maid 4329, by Enterprise, and out of Oxford Girl, now a superior good litter by the son of the noted Baron Lee 4th, and they are a smooth, well-marked lot; this being her 4th litter. Lady May 4958, by Lord Ross, and out of Minnie May 2nd, also falls nothing short of being a true type of the breed; she is a smoothly built, long, deep-bodied sow, perfectly marked, and well covered with natural flesh. Four six months cows and two boars of the same age are now offered for sale that are quality all over.

## NOTICE.

### DOMINION ORGAN AND PIANO CO.

In the beautifully situated town of Bowmanville, some forty miles east of Toronto, on the main line of the Grand Trunk R.R., is the plant of the Dominion Organ and Piano Co., a firm which has been in existence for over a quarter of a century. Year by year, steadily progressing, the firm has gone on till they now employ a small army of skilled mechanics, and are amongst the most important manufacturers of high class organs and pianos in Canada. During their career they have gained over 325 medals, diplomas, and distinctions for the excellence of their productions in all parts of the world, including the only gold medal awarded for Canadian organs at the World's Fair, Chicago, in 1893. The officers of the company are J. W. Alexander, President; Wm. Vann, Secretary; William McConnell, Treasurer, and John H. Kidd, Manager of the manufacturing department, all of whom have had many years of practical experience and are conversant with every detail of the business. The four-story red brick factory, with supplementary buildings and storage yard, cover an area of some five acres. In going over the factory one cannot but be impressed by the attention paid to every detail in the manufacture of the various parts of the instruments in order to secure economy of labor and efficient production. Each branch is carried on in separate departments, and the machines employed are of the latest and most improved designs. The instruments of the Dominion Organ and Piano Co. are well known to most of our readers, as they have achieved a splendid reputation not only in Canada but in England, on the Continent, and we were informed that in the face of heavy duties and keen competition their instruments are finding their way into many parts of the United States. The favorite styles of the Dominion organs are New Edinburgh, Dundee, Manchester, New Cabinet Grand, Vestry, Chapel and Concert cases. The upright pianos manufactured by this company are constructed with a patent iron arch-plate frame which makes the instrument impervious to any change in temperature, and consequently admirably adapted to stand any climate at home or abroad. By this system of construction a clear space is secured at the back of the sounding-board and heavy wooden parts are dispensed with, making them doubly strong, and a sounding-chamber is thus formed which permits of a full, free and independent vibration of the sounding-board, and a full, brilliant tone results. The instruments are made in rosewood, French burl walnut, mahogany, gray maple, Italian walnut, fancy quartered oak, or any other desired wood. Many highly priced improvements are constantly being added. The company pride themselves in keeping strictly in the front ranks and their products at equal pace with the best and in advance of the majority. Another important branch has lately been entered into by this firm—the manufacture of a highly improved nonsplittable bicycle rim, which for endurance and elegance of finish has won the very foremost position in the markets of the world. During our late visit to the factory we were informed that one firm in England is taking the output of day and night labor for a year to come.

# Premiums!

## Bagster's NEW COMPREHENSIVE Teacher's Bible

Containing the Old and New Testaments, according to the authorized version, together with new and revised helps to Bible study—a new Concordance and an indexed Bible Atlas, WITH SIXTEEN FULL-PAGE ILLUSTRATIONS, PRINTED IN GOLD AND COLOR.

### Binding—

Strong, durable, flexible American Seal (best material) improved circuit cover, round corners, red-under-gold edge.

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Of superior quality, clear and distinct, easy to read.

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Covering nearly 2,000 subjects—contain all features so popular in the past, and an endless amount of fresh matter, including concordance on new and improved plan, dictionary of proper names and places, with pronunciation and meaning. Size 8½ x 5½ inches (closed).

### How to obtain this Handsome and Valuable Bible

(Which ordinarily would retail at from \$4 to \$5): We will send (carefully packed, post prepaid) this Bible to anyone sending us the names of THREE NEW SUBSCRIBERS to the FARMER'S ADVOCATE at \$1 each.

## HOW TO GET A

# First-class Collie



TO any subscriber sending us the names of 10 new yearly paid-up subscribers we offer a young Collie, six weeks old or over, eligible for registration, and bred by Mr. R. McEwen, Byron, Ont., whose stock has been so successful in the leading shows in Canada and the United States.

"Canada's Glory,"

"Canada's Pride,"

"Canada's Columbian Victors"

All three may be obtained by any subscriber sending us the name of one new yearly subscriber, or for 50 cents cash.

Address— **The WM. WELD CO., Limited,**

London, Ontario.

See last issue for fuller list crowded out.







**"Gem Holstein Herd."**  
**STOCK FOR SALE!**  
 We only keep and breed registered Holstein-Friesians. We have now some choice young bulls and heifers, also some older animals, all of the very best dairy quality, that we will sell, one or more at a time, on reasonable terms. Correspondence solicited.  
**HILLIS BROTHERS,**  
 REDFORD PARK P.O., ONT.  
 Shipping Station, Toronto. 7-y-om

**Guernsey Cattle**  
**CHESTER WHITE AND DUROC-JERSEY PIGS.**  
 At present we are offering  
**4 Richly-bred Bull Calves**  
 two of which are from imported cows, and pigs of all ages.  
**WM. BUTLER & SON,**  
 DERHAM CENTRE, ONT.

**GUERNSEYS**  
 This is the Dairy breed for ordinary farmers. Large, vigorous and hardy, giving plenty of rich milk. Several fine young bulls for sale at very reasonable prices. A few heifers can be spared.  
 Address: **SYDNEY FISHER,**  
 Alva Farm, Knowlton, P. Q.  
**Guernsey Bulls for Sale.**  
 We are now prepared to dispose of half a dozen young bulls of gilt-edge breeding.  
**McNISH BROS., LYN, ONT.**

**Ingleside Herefords.**  
**UP-TO-DATE HERD OF CANADA!**  
**Bull Calves**  
 OF THE RIGHT SORT  
**For Sale.**  
 Address—  
**H. D. SMITH,**  
 17-y-om Compton, Que.

**LEICESTER SHEEP ONLY**  
 Yearling and ewe lambs for sale at moderate prices. We have only a few, but they are all first-class animals, with good pedigrees.  
 Address—**G. & E. WOOD,**  
 Freeman P.O., Burlington Station, Ont.

**Cotswold Sheep**  
**AND BRONZE TURKEYS**  
 Rams and ewes of all ages, all registered, and from prize-winning stock. Turkeys from 42-lb. tom and Munger hens.  
**T. HARDY SHORE, Gleanworth, Ont.**

**SMITH EVANS, Gourock, Ont.**  
 Breeder and importer of registered Oxford-Down Sheep. Selections from some of the best flocks in England. Stock for sale at reasonable prices. Inspection invited. 6-1-y-o

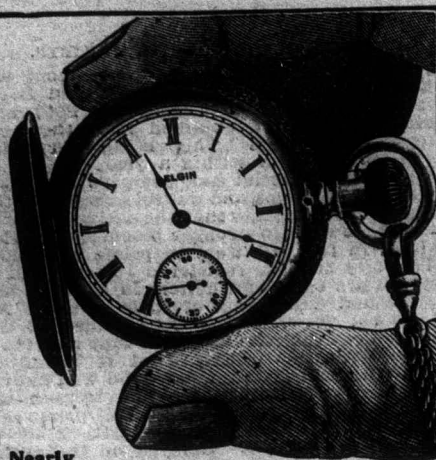
**Oxford Down Sheep.**  
 A fine lot of Young Stock for sale. A few nice Yearling Rams and Ewes. Prices reasonable. Inspection invited.  
**Herbert Wright,**  
 6-2-y-om Box 47, GUELPH, ONTARIO.

**"FARNHAM FARM" OXFORD DOWNS.**  
 I HAVE for sale a choice lot of yearling and ram lambs, yearling ewes, and ewe lambs for 1897. Prices reasonable.  
 7-y-om **H. ARKELL, Arkell P.O., Ont.**

**W. E. Wright,** Shropshire Sheep, Chester White Hogs, Bronze and White Holland Turkeys.  
 GLANWORTH, ONTARIO.

**ASHTON FRONTVIEW STOCK FARM**  
 A. J. WATSON, CASTLEBERG, ONT.,  
 Importer and breeder of Cotswold Sheep, Shorthorn Cattle, and Berkshire Swine.  
 Station and Telegraph Office, Bolton, C. P. R., or Paigrove, G. T. R.

**ADVERTISE IN THE ADVOCATE**



Nearly  
**Eight Million Elgins**  
 More watches than any other factory in the world has produced in the same period.  
 A Full Ruby Jeweled Elgin Watch has pivotal parts of such hardness, acting upon jeweled bearings, together with such exquisite exactness of adjustment that it is practically wear-proof—and unvarying in action.  
 All Elgin watches are good—Full Ruby Jeweled are best—at all jewelers.  
 An Elgin Watch always has the word "Elgin" engraved on the works—fully guaranteed.

**LITTLE'S PATENT FLUID**  
**(NON-POISONOUS)**  
**SHEEP DIP**  
**AND CATTLE WASH**

THE ORIGINAL  
**Non Poisonous Fluid Dip.**  
 Still the favorite dip, as proved by the testimony of our Minister of Agriculture and other large stockmen.  
**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 75c. 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.  
**Robt. Wightman,**  
 DRUGGIST, OWEN SOUND, ONT.  
 Sole agent for the Dominion. —om

**FOR CHOICE**  
**Shropshire Rams**  
 Of finest breeding and quality, at moderate prices, call at Maple Shade, or address,  
**JOHN DRYDEN, BROOKLIN, ONT.**  
 A. H. CHRISTIAN, Foreman.

**SHROPSHIRE SHEEP... AND JERSEY CATTLE.**  
 At present offering a choice bunch of thrifty, well-covered young Shrops. Also two young Jersey bulls, ready for service.  
**D. H. KETCHESON, MENIE, ONT.**

**R. HONEY,**  
 Warkworth, Ont., Northumberland Co.,  
 BREEDER OF  
 Reg. Holsteins, Large White Yorkshires, and Cotswold Sheep.  
 Choice young Yorkshires for sale at prices to suit the times. Orders booked for choice Cotswold ram lambs. 12-3-y-o

**A Snap!** IMPROVED YORKSHIRE and LARGE ENGLISH BERKSHIRE BEARS and Sows weighing from 30 to 40 lbs. at \$6.00, older ones proportionately cheap. Also a few fancy-bred Shropshire Lambs at reasonable prices.  
**W. R. BOWMAN, Mt. Forest, Ont.**

**Prince Edward Island Crops and Markets, and the new Pork-packing Industry.**

The ground froze on November 18th for the first time in the season. There was fair sleighing for a week, and till the 27th, when the wind came south again, and the ground thawed and the snow melted away, and as a consequence our people, reluctantly, were compelled to take to the wheels again. The markets are pretty lively in all of the Island, shipping places these days, and had the sleighing continued trade would here continue much brisker. Potatoes are the principal commodity shipped from Island ports at present. The price is general in cattle, but the prices offered and being paid are very low. Dry cows in good flesh are fetching not more than an average of \$12. Oats are firm at 28c. At the present time there is a brisk movement in live hogs for the new pork-packing establishments started in Charlottetown. D. Morton Rattenbury, for hogs by buyers for his establishment now are: 100-150, 40c. 150-200, 42c. 200-250, 44c. It is a thoroughly equipped modern packing establishment in every respect, with a capacity for slaughtering, dressing and curing 1,000 hogs per day. One of the best men that could be secured in Germany has charge of the smoking department. The type of hogs wanted are the long, deep-sided, with lean meat, weighing from 110 to 200 lbs. It will make a splendid home market for hogs, and coupled with our successful dairy industry is destined to prove of immense importance to the Island. The enterprise deserves success. This grand Dominion is on the eve of prosperity—if not already here—and you will best serve the interests of farmers by devoting liberal space to swine, sheep and poultry breeding, the triumvirate of animals to "bank on," and the growth of rye and rape, peas, roots, barley and clover to feed this trinity.  
**J. A. MACDONALD.**

**A Healthy Outlook in N. B.**  
 Mr. Donald Innes, Victoria Co., N. B., writes deploring the haphazard way in which horses are too often bred; and though for pasture and water New Brunswick is as fine a country as there is in the Dominion, for instance, on the eastern side, where, with marsh, hay, roots and a little grain, beef could be made so cheaply, yet so few beef cattle are raised. But there will be more in the near future. Shorthorns leading. Dairying has made great progress, the Ayrshire cow being the favorite for that purpose. The high lands constitute a great heritage for sheep, which are on the increase; the demand for breeding sheep being strong for the large, long-wool, mutton breeds. They are also larger lambs than they get in Ontario, he says, judged by the Government importation last fall. The United States is their best market. The modern type of bacon hog is coming in. Berks, Yorkshires and Chester Whites are the favorites. Mr. Innes' judgment is in favor of largely increasing the breeding of good stock, but considering that the Maritime breeders can supply all the pure-bred farm stock wanted.

**NOTICES.**  
 A LOAN COMPANY MANAGER'S IDEA OF WHAT CONSTITUTES MANITOBA'S GREATEST SUCCESS.  
 "Of all the heterogeneous mass of humanity in the Province," says Mr. William Harvey, of the London & Ontario Investment Co., "perhaps that class known as the Teutonic stock shows the greatest advancement and power. From almost poverty, the German, and particularly the Mennonite, settler has raised himself into a position of comparative ease and comfort. To accomplish this he has equipped with an humble status he has learned the art of 'doing without' when his circumstances told him he must not unnecessarily run into debt," he has been frugal to a fault, industrious in the highest degree, honest in his business dealings, and with a strong religious vein running through his life he has been able to surmount difficulties that would have daunted a foreign tongue, with little in common with his fellow English-speaking settlers. The Mennonite was hardly a match for the astute trader at whose hand he came off very often, second best. Whatever experience he has acquired he has bought dearly, but he has triumphed where others situated similarly, have accepted defeat as inevitable. Mr. Harvey is a firm believer in the growth of the Province through the increase and spread of those people. In the east they are closing in upon Springfield, Loreto, Oak Island, and St. Norbert. On the south they have spread from Gretna and Emerson eastward to the Roseau River, and northward to Steinbach, La Salle and Scotch River, and ere long he says the problem of the settlement of Winnipeg lands will be settled, not by the class of farmers heretofore conceived but by the steady march of this same thrifty Teutonic family of husbandmen. Mr. Harvey's conclusions will, we trust, be proved to be correct. His opinions should have considerable weight, as his and the Mennonite settlers have been extensive for many years past. There are thousands of acres of magnificent lands near Winnipeg district which can be bought at wonderfully low prices and most favorable terms. Mr. Harvey's company has a very extensive list, and will be pleased to furnish full information, as per his advertisement in this issue.

**NO DUTY TO PAY NOW**  
 RUNS EASY, BACKSACHE, WEIGHTS ONLY 41 LBS., EASILY CARRIED, SAWS DOWN TREES.  
 In the FOLDING SAWING MACHINE. It is made in Essex County, Ontario. It saves down trees, saws any kind of timber on any ground. 8 CUBIC FEET IN 10 HOURS. Sent for free list and showing latest IMPROVEMENTS, and testimonials from thousands. First order secures agency. Address Main Office, FOLDING SAWING MACHINE CO., 64-66 S. Clinton Street, Chicago, Ill.

**A COLLEGE EDUCATION 50 CENTS A WEEK**

For \$3 down and \$3 a month, we give AN EDUCATION IN THE THEORY OF  
**ELECTRICITY**  
 Wiring and Bell Work; Mechanical Drawing; Mechanical or Civil Engineering; Refrigeration; Locomotive, Steam, Marine or Gas Engineering; Bookkeeping; Shortland; English Branches; Pedagogy; Chemistry; Metal, Coal or Placer; 43 COURSES: Mining; Structural Drawing; Surveying and Mapping; Sanitary Plumbing; Architecture; Sheet Metal Pattern Drafting; Architectural or Machine Design; Prospecting.  
 All who GUARANTEE SUCCESS study.  
 We have helped thousands to better positions & salaries. Circular free; state subject you wish to study. International Correspondence Schools, Box 900 Scranton, Pa.

**Oak Lodge Herd — Yorkshire Hogs**  
 ARE MY SPECIALTY.  
  
 One hundred pigs on hand from two to three months old. Quality guaranteed. Prices reasonable. Come and inspect my stock.  
**J. E. BRETHOUR, BURFORD, BRANT CO.**

**THE AVON HERD**  
 Of CHESTER WHITE and POLAND-CHINA SWINE.  
 Have April, May and June pigs for sale of extra quality and breeding.  
 Also young boars and sows fit for service.  
**HENRY HERRON, Avon P. O., Ont.**

**THE DUROC-JERSEY-YORKSHIRE CROSS**  
 (The ideal bacon, modern market hog.)  
**HERMANVILLE YORKSHIRES, HERMANVILLE DUROC-JERSEYS.**  
 Can supply pigs of both breeds, in their purity, from April, 1898, litters at six weeks old.  
 Address—  
**J. A. MACDONALD, HERMAN MACDONALD, Hermanville Farm & P.O., P. E. I.**

**ROSE HILL FARM.**  
**JAMES DORRANCE, SEAFORTE, ONT.**  
 BREEDER OF  
**REGISTERED : BERKSHIRES**  
 Of the most approved type. Choice young stock always for sale. Write at once and secure a bargain. 18-2-y-om

**Campbell & Martinson,**  
 NORTEWOOD, ONT.,  
 Breeders of  
**Berkshire and Chester Swine,**  
 Minorcas, Wyandottes, Games, and Dorkings. Young pigs, both sexes and breeds, for sale. Also, three registered Shorthorn bull calves and three Leicester ram lambs. —o

**1898 OFFERING FOR 1898**  
 TWO extra good Berkshire boars fit for service, and a number of young sows in pig to show boars. Also a fine lot of 3 months pigs, York, boars and sows of the best type from 3 months to 8 months old from show stock. Prices right. Express charges prepaid. Inspection invited.  
**H. J. DAVIS, Box 290, Woodstock, Ont.**

**LARGE ENGLISH BERKSHIRES.**  
 Herd headed by the grand stock boar, Bright Star. Young stock of all ages on hand. Can ship single or in pairs not akin. B. P. Rock eggs from choice imported stock. Write for prices.  
**H. BENNETT & SON, St. Williams, Ont.**  
 St. Williams Station and Telegraph Office. —om

**BERKSHIRE PIGS.**  
 A fine lot of young Pigs on hand for sale. Prices reasonable.  
**JOHN RACEY, Jr., Lennoxville, Que.**  
 17-1-y-o

**WM. McALLISTER, VARNA, ONT.**  
 Breeder of choice BERKSHIRE SWINE. Young stock of all ages, and either sex, always for sale. "First Prize," the winning yearling boar at Toronto and London, at head of herd. Correspondence solicited. Address—  
 2-2-y-o **WM. McALLISTER, VARNA, ONT.**

**RODS, GOLDMETERS,**  
 Spanish Needles, Pocket Compass, Earth Mirrors, Circulars for 2c. stamp. **E. G. Stauffer, Harrisburg, Pa.**







**BREEDERS' DIRECTORY.**  
 Cards up to six line space inserted under this heading, one issue a month, \$3 per line per annum; every issue, \$5 per line. Payable in advance.

**JAS. TOLTON,** Walkerton, Breeder and Importer of Oxford Sheep, also Breeder of Shorthorn Cattle and Bronze Turkeys.

**JOSEPH YULL & SONS,** Carleton Place, Ont., breeder of Ayrshire Cattle, Shropshire Sheep, and Berkshire Swine. Young stock for sale.

**J. P. PHIN,** Breeding and Importing THE GRANGE, SHEPHERD, a specialty. HEMPEL, ONT.

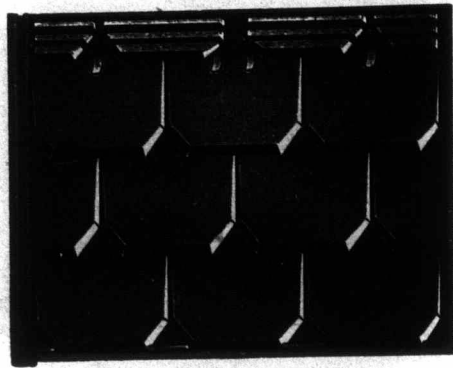
**R. J. McNEILL,** Ormstown, Que., breeder of registered Berkshires. Young stock always for sale at reasonable prices.

**GOSSIP.**  
 SHORTHORNS AND LEICESTERS AT MAPLE LODGE.

A visit to the noted herds and flocks of Maple Lodge Farm will repay any one who is interested in such stock. The herd has been established a great many years, as is well known to our readers, and only the constant and untiring attention of its owner has placed it where it stands to-day in the front ranks. The Leicester sheep, too, have received their full share of attention, and stand second to none. Our attention upon our visit was directed first to the Shorthorns, and many animals were gone over and numerous pedigrees traced to their fountainhead, and one cannot but be impressed by the high standard of breeding that has been employed all along. The present stock bull, *Caithness*, by *Jocelyn*, a son of imported *Village Squire*, and out of imported *Julia* has for Dam 2nd Constance of Maple Lodge; he being her second calf. Her first was the three-year-old winner at the fat stock show last fall. Her fourth calf won first prize this year at Toronto, and her fifth, a heifer, now about two months old, by *Village Squire*, is very promising. *Caithness*, now in his three-year-old form, has an abundance of sweet quality, coupled with size and activity possessed by only a few. He carries his immense weight well under command, is well and evenly covered, and from his ancestors he should combine beefing and dairying qualities in his progeny to a nicety. The young Cruickshank-bred *Village Squire*, by *Abbotsford*, is also employed in the herd, his pedigree tracing directly to imported *Village Blossom*, and, says Mr. Smith, "we are using him on cows in the herd closely bred to *Caithness*." He also possesses good style, coupled with length and depth of body, and is of a beautiful roan color. A young British Flag bull was lately shipped to head the noted herd of *Lake Elysium* Stock Farm in Minnesota, quarantine regulations requiring him to be tuberculin tested, which he stood well, his temperature not varying one-half degree throughout the entire two days' operation. Along the line of dairying qualities we may note in this herd the roan cow *9th Princess of Thule*, who made a butter record of 15 lbs. per week and 52 lbs. milk per day on grass alone. She is of nearly pure *Constance* breeding, by *Prince of Colonas*, and out of *Princess of Thule*, by *Famosa Chief*. Her roan daughter, *14th Princess of Thule*, by *Conqueror*, made from 45 lbs. milk per day 14 lbs. utter in one week on winter feed. Both of these cows possess an abundance of substance, coupled with strong quality, and carry immense, well-balanced udders, and are regarded as breeders, never failing to stamp their strong dairying qualities on their progeny. *Lovely Queen 13th*, four years old, also possesses strong dairying qualities, as is evident by her udder and the manner in which she reared her pair of heifer calves by *Village Squire*. The three-year-old roan, *Lovely Queen 15th*, by *Lavender Prince*, dam *Lovely Queen 10th*, by *Conqueror*, and *Lovely Queen 12th*, out of *Lovely Queen 3rd*, possess the strongest of beefing qualities, as is shown in the *Lavender* blood all through, and also considered to be Cruickshank's best milking families. *Constance 2nd* of Maple Lodge and *Constance 3rd* of Maple Lodge, out of *Constance* of Maple Lodge, and by *Conqueror*, are two cows five and seven years old which possess, perhaps, as great dairying qualities, considering their beefing conformation, as any to be found of the breed. *Constance 2nd*, under test, giving 50 lbs. milk per day, while her sister is in no way behind her, both raising beautiful calves. *Constance 2nd's* bull calf, *Cedric*, winner of first prize at Toronto Industrial, by *British Flag*, is a very growthy, smooth, showy animal possessing superior quality of bone, being well topped and muscled well down in the quarters; while *Constance 3rd's*, by *Caithness*, is a few months younger, but possesses the sweetness in conformation of his worthy sire. A bunch of half a dozen yearling heifers command the attention and admiration of visitors to the farm. They are daughters of such cows as *Constance 3rd* of Maple Lodge, *Duchess Jane 12th*, *Constance* of Maple Lodge, *Lovely Queen 13th*, *6th Princess of Thule*, and were sired by *Abbotsford* and *British Flag*. From their breeding, conformation, and under their present management, they are as worthy a bunch as one could easily find, being, with one exception (a roan), of solid red color. Prospective buyers can make no mistake in visiting such an establishment, as they can be assured the benefits of a life-long experience in which only the best obtainable blood has been introduced to make this one of the strongest herds in existence to-day on the continent.

In Leicesters the firm carried over 100 head until the fall business opened up, which has somewhat reduced that number. Here, again, we found that none but the choicest blood had been allowed into the flock, as the prize-winnings all through go to show. The animals are of strong, useful type, well chosen as to quality and substance, with due regard to their covering. Forty or more breeding ewes are constantly kept on hand, and each generation adds a new sire to their pedigrees. The last season's crop of lambs was an unusually large one, and for evenness we have not seen better. In the showing Mr. Smith is well known, year after year his name appearing prominently in the prize winnings, and we could go back and employ column after column in quoting his winnings from year to year, but for the present we deem it sufficient to mention winnings in 1897. At Toronto they were: 1st on Shorthorn bull calf, *Cedric*; 2nd on Shorthorn bull, three years, *Caithness*; and on Leicesters, 1st and 3rd on aged rams, 3rd on shearing rams, 1st on aged ewes, 3rd on shearing ewes, 1st on flock. At London the winnings were: 1st and 3rd on aged rams, 2nd on shearing ram; 1st and 3rd on aged ewes, 3rd on shearing ewe, 3rd on ewe lambs, 1st on flock, and sweepstakes on ram any age. At Ailsa Craig the Shorthorn winnings were every 1st prize, except one in females, offered; no bulls were shown; and in Leicesters, every 1st prize offered. In looking over the above, and considering that at no period was the competition more keenly contested than the year '97, we feel that it would be hard to overestimate such animals as are to be found at Maple Lodge.

**EASTLAKE Steel Shingles!**



SHOWS ONE SHINGLE.

These Shingles have been on the Canadian market twelve years, and have never failed to give satisfaction. They are absolutely FIRE, LIGHTNING and STORM PROOF, besides being very ornamental and easily applied. Our Catalogue will tell you all about them. Drop us a line saying you saw our advertisement in the "Advocate" and we shall be pleased to quote you close prices.

METALLIC ROOFING CO. (LIMITED),  
 Sole Makers, TORONTO.

HAVE YOU SEEN OUR STEEL BRICK!



**CURE LUMP JAW**  
 SURELY, QUICKLY, AND FOR GOOD WITH FLEMING'S LUMP JAW CURE

Farmers and ranchers must know about this remedy. The plague is rapidly spreading, and it will only be stamped out when this remedy is universally used to combat it. Lump Jaw is contagious, and a single case among your stock may infect your herd and your pastures. The remedy is easily used, applied externally, and one to three applications cures.

**The Guarantee** Every bottle is sold under the agreement that if it fails your money is to be returned. The record thus far shows three failures only in each thousand cases.

PRICE, \$2.00 A BOTTLE.

Sent by mail on receipt of amount. Illustrated treatise on Lump Jaw FREE.

W. J. FLEMING, Prince Albert, N.W.T., or J. H. FLEMING, St. George, Ontario.

**\$70.00**  
 FOR THE American Cream Separator NO. 1

Actual capacity of 250 lbs. per hour.  
 No. 2 American, capacity 350 lbs. per hour, \$100  
 No. 3 " " " 600 " " 135

**Most SIMPLE, DURABLE, EASIEST CLEANED.**  
 A perfect skimmer. Unsurpassed by any machine on the market as a cream separator, and the prices unequalled. Try one. We want a machine in every territory. Write for full particulars and catalogue. We manufacture all kinds of goods for the manufacture of butter and cheese. Also fodder cutting machinery.

**Richardson & Webster,**  
 ST. MARY'S, ONT.

**IMPORTANT TO BREEDERS AND HORSEMEN.**  
**Eureka Veterinary Caustic Balsam**

A reliable and speedy remedy for Curbs, Splints, Spavins, Sweeney, etc., in Horses, and Lump Jaw in Cattle. See pamphlet which accompanies every bottle, giving scientific treatment in the various diseases. It can be used in every case of veterinary practice where stimulating applications and blisters are prescribed. It has no superior. Every bottle sold is guaranteed to give satisfaction. Price 75c. per bottle. Sold by all druggists. Prepared by THE EUREKA VETERINARY MEDICINE COMPANY, London, Ont.

**LIGHTNING WELL MACHY PUMPS, AIR LIFTS, GASOLINE ENGINES.**  
 CIRCULARS FREE  
 THE AMERICAN WELL WORKS.  
 AURORA, ILL. - CHICAGO - DALLAS, TEX.

**TOLTON'S No. 1 Double Root Cutter**



The Latest and Best, and the Only Double Root Cutter Manufactured.

**POINTS OF MERIT.**  
 (1) To change from pulping to slicing is but the work of a moment. (2) There are two separate wheels, one for pulping and the other for slicing. (3) The united force of both wheels is always used in doing the work in either capacity. (4) The hopper is between the wheels, and having large lower pockets prevents choking.

Soliciting your orders for the same, we are, yours truly,  
**TOLTON BROS., GUELPH, ONT.**  
 Pat. Sept. 6, 1894. (When writing, please mention "Farmer's Advocate.")

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**GOSSIP.**

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

Prof. A. E. Shuttleworth, head of the Department of Chemistry at the Ontario Agricultural College, now in Germany pursuing an advanced course of study, writes us that he is greatly pleased with the opportunities in agricultural science available there, and hopes to remain at least another year.

A typographical error occurred in the article on winter egg production by Mr. A. S. Gilbert, poultry manager Central Experimental Farm, on page 499, Nov. 15th issue, factor 4, where it read "meal of some kind should be fed," the word intended being "moat." The overfeeding of ground grains, in the shape of mash, Mr. Gilbert writes us, is one of the things that prevents successful winter egg production.

The Canadian Almanac, issued by the Copp Clark Co., Limited, Toronto, has set the standard for that class of publication, so far as the Dominion is concerned. The 51st annual volume to hand has been increased in size to 368 pages, and is more useful and interesting than ever. All the old, reliable features are continued, besides several new ones. A beautifully engraved map of North America in five colors goes with every copy.

Mr. A. Elliot, Pond Mills, is now offering half a dozen each of Tamworths, Duroc-Jerseys, and Poland-China pigs, which are an even lot. The Tamworths are true types of that popular bacon breed, possessing length and depth of body, and the best of feeding qualities. All present a growthy appearance, being kept in fair growing condition. Mammoth Bronzes and White Holland turkeys have been raised a specialty here for some time, and Mr. Elliot is in a position to know a good bird when he sees it, and his former dealings have won a steadily increasing demand for this class of stock. The collie dogs are also a typical lot, and each year are finding their way into new sections, giving the best of satisfaction.

Henry Arkell, "Farnham Farm," Arkell, Ont., writes: "I have had a very good year with sales of Oxford Downs this season, and send you a small list of sales. I went out personally to Wyoming with a carload of yearlings for Ed. Rife, Rock Springs; had a pleasant visit among the sheep ranchmen for four weeks; found the cross-bred Oxford giving great satisfaction. Also sold a carload of yearling ram lambs to George McKerron, Sussex, Wis., as well as a show lot; a carload of ram lambs to H. Jones, Fort Steele, Wyoming, and 48 ram lambs to Donald McKellar, Calgary, Northwest, for the ranch of Gordon S. Ironside; and show lots to Uriah Privett, Greensbury, Ind., and C. J. Campbell, Pittsfield, Ohio; and over 40 retail to British Columbia, Manitoba, Quebec, the Northwest, Canada, and the United States."

**SHORTHORNS AT G. A. BRODIE'S, BETHESDA, ONT.**

The Shorthorn herd of G. A. Brodie, Bethesda, Ont., now numbers some 35 animals, headed by the imported stock bull Kinellar Sort 1897, by Royal James, and out of Mary Ann 2nd. It was imported from his breeder, estate of the late Sylvester Campbell, by John Isaac, Markham, and employed by him for two seasons, and was held in the highest esteem, his stock being very desirable. Kinellar Sort has been employed by his present owner for two seasons, giving the best of satisfaction, his stock resembling himself in conformation, possessing depth and smoothness of quality that must be seen to be appreciated. The matrons number over a dozen, the original stock being purchased from Samuel Holman, Columbus, when May 1422, by Yensgar, 1309, and Dolly, were purchased, both cows proving very profitable animals, breeding regularly. Six females descended from May are now on the farm, three raising calves. Dolly's stock have all been sold at good prices. Purchases have been made from such breeders as John Isaac, John Mills & Son, until the herd has assumed its present proportions. The animals offered for sale are three bulls rising a year old, by Kinellar Sort; three bulls rising a year old, possessing big, growthy, sappy fellows, possessing sufficient substance to recommend them, and all of deep red color; four choice red and roan heifers by the same sire, and a pair of roans by Alexander, by Guardsman, all being descended from the same line of breeding as the original stock, which traces back to importations made by Hon. John Dryden. Eight promising calves which constitute a herd within themselves are also to be seen. With the present stock in Mr. Brodie's hands and the facilities for caring for and developing them now on the farm, we predict the best possible results for him, as his premises are most admirably adapted for pure-bred stock-raising, having sufficient room, with good light, ventilation, and all modern conveniences; the farm being beautifully situated and under sufficiently good state of cultivation to win the gold medal in competition some three years ago.

**Short Pedigrees Disapproved.**

E. & O. Chase, King's Co., N. S., reviewing live stock conditions, reports that Clydesdale horses bred to the mares of this country are doing the best and coming into more general use. The Hackneys imported a few years ago did not prove a success as a cross on native mares. Capabilities for cattle-raising are favorable. Shorthorns are the most numerous and most favored breed. Polled Angus and Herefords do not spread, and the Davons have lost their footing. The Jersey does not suit the general farmer. Guernseys are being more sought after. Ayrshires and Holsteins have their friends. The former would succeed well in many places. The general farmer needs a cow good for milk. That bred to a Shorthorn bull will raise a calf good for beef. The low standard of stock pedigrees is deplored. The fourth cross being classed as pure-bred. These short pedigreed sires too often take the place and fix the price for the better-bred animal. Short-wool sheep do better than long-wools, the springs being backward and often wet, so that the latter seem to drag around a heavy load of water-soaked wool.

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**BOYS FOR FARM HELP.**

The managers of Dr. Barnardo's Homes will be glad to receive applications from farmers or others for the boys who are arriving periodically from England to be placed in this country. All the young immigrants will have passed through a period of training in English Homes, and will be carefully selected with a view to their moral and physical suitability for Canadian life. Full particulars as to the terms and conditions upon which the boys are placed may be obtained on application to Mr. ALFRED B. OWEN, Agent, Dr. Barnardo's Homes, 214 Farley Ave., Toronto.

**GOSSIP.**

Among recent sales from the well-known flock of W. S. Hawkshaw, Glanworth, Ont., was an important one of 42 head for Prof. J. A. Craig, late of the Experimental Farm, Wisconsin, now of the Iowa Experiment Station. He also took drafts from Messrs. Gibson and Beattie. He also says the demand for Shropshires has been very large this fall.

Capt. T. E. Robson, Iderton, Ont., has purchased from J. M. Gardhouse, Highfield, and placed at the head of his herd the imported Shorthorn bull Guardsman, bred by Mr. Duthie, Colynie, and imported by John Miller & Sons, Brougham. Guardsman is a seven-year-old son of Chesterfield, out of Gardena Gauntlet, by Ross Gauntlet, and tracing to Brawith Bud. He is said to be a bull of fine quality of flesh, and an excellent breeder, being the sire of St. Valentine, sweepstakes winner at many State fairs in the West in the last two years.

One of the very attractive features of the Christmas number of the Canadian Magazine is a well-illustrated description of the works of the E. B. Eddy Company, Limited, the headquarters of which are at the town of Hull. This is one of our greatest Canadian manufacturing enterprises, comprising in all some 40 factories, covering many acres of ground, and the description given of many of its products is exceedingly interesting. The wages paid by this concern total over \$1,200 per day, or nearly \$400,000 annually, and the average daily output of products is as follows: Matches, 35,000,000; indurated fibreware, 200 articles; woodenware, 3,000 pails and tubs; washboards, 600; paper, 45 to 50 tons; sulphite fibre and wood pulp, 50 tons; paper bags, 50,000. Our readers will be interested to know that the paper on which the FARMER'S ADVOCATE is printed is manufactured at the Eddy establishment.

**THE "TREDONNOCK" HERD OF AYRSHIRES.**

One of the very best herds of Ayrshire cattle on the continent is found at "Tredonnock," the fine farm of R. Reford, Esq., which is situated close to St. Anne's Station, on the G. T. R. and C. P. R., twenty miles west of Montreal, in which Mr. Reford has extensive business interests, the farm and herd being under the efficient management of Mr. James Boden, who is acknowledged to be one of the very best judges of Ayrshires in Canada, having been "to the manor born," and having a genuine love for that class of stock. The quality of his judgment is well attested by the character of the stock found on the farm, which, for uniformity of type and general excellence, is probably unsurpassed in any herd in America. The herd numbers nearly sixty head of registered animals, and is headed by the two high-class imported bulls, Glencairn 3rd and Napoleon of Auchenbrain, the latter a two-year-old, selected in Scotland last winter by Mr. Boden, to be used mainly upon the daughters of the grand old stock bull, Glencairn 3rd, now in his seventh year. Napoleon is a fine pattern of a dairy bull, with straight top and bottom lines, fine withers, long yet muscular neck, long, level hind quarters, a stylish carriage and a soft and pliable skin, covered with soft silky hair, and has back of him an ancestry famed for milk and show records galore. Glencairn 3rd is a king among his class individually, and can show a collection of thirty daughters which for uniformity of excellence may safely be pitted against the get of any bull of the breed on this side of the sea. There is that in his composition which marks him an exceptional animal of his kind, and one which at sight conveys the impression that he was born to be a great sire. The imposing appearance which indicates character, the lengthy, deep body, long yet strong and well-arched neck, fine, smooth shoulders, and over all the rich yellow skin, mellow to the touch and with soft silky hair, are such as delight the eye and the hand, and these qualities are possessed in large and full measure by his offspring, as one would naturally expect from his own make-up and the long list of prize-winning sires behind him in his pedigree. Among the milky matrons in the byre was noticed Annie of Barcheskie, imported by the late Tom Brown, along with her famous fellow traveler, Nellie Osborn, and much of the same pattern—built for usefulness. Kerstie of Auchenbrain, and Primrose of Holmhouse, are three-year-old cows, imported in the present year. The former, by the same sire as Napoleon, has model dairy conformation, a fine head and horns, and a finely formed milk vessel. Primrose is a grand type for show and service, with heavy hind quarters and sloping shoulders, deep forrims, a well-balanced udder, and large and well-placed teats. Lantaka, a handsome and serviceable four-year-old, has fine dairy form and capacity for work. Donoon, coming three, is a big, good sort, showing strong constitution, without coarseness, and has much quality. Ruby of St. Anne's, by Glencairn, is a two-year daughter of Margie of St. Anne's, which gave 65 pounds of milk per day, and was sold for a low price. She is due to calve this month, and promises to follow the lead of her dam as a producer. Sweet Flagg, Margie 4th, Elsie Deans and Betsy Bore are a quartette of large, deep-bodied cows, that have proved good workers, the last three coming due to calve this winter; the other is fresh and doing good work. A pair of pretty daughters of Glencairn 3rd are Snowdrop and Queen of St. Anne's, the former a daughter of imported Annie of Barcheskie, and are models of the modern type—low, deep, and full of quality. Annie Rooney and Booming Heather are daughter and granddaughter of the old imported cow, and carry the family likeness clearly defined. A bevy of beautiful calves, by Glencairn, have grand coats of hair, and promise well to maintain the character of the herd, while two capital young bulls, coming a year old, which will soon be fit for service and are for sale, as well as a few good young cows in calf to the imported bulls, make up a grand collection of cattle, strong in character and constitution, and bred for usefulness as well as appearance. We hope in a later issue to give a description of the splendid new farm buildings at Tredonnock, which in our opinion are among the most complete in design, construction and convenience in the Dominion.

**HOME COMFORT VICTORIES.**

FOUR MEDALS—3 Gold and 1 Silver, World's Centennial Cotton Exposition, New Orleans, 1884. HIGHEST AWARDS—Nebraska Agricultural Fair, 1887. DIPLOMA—Alabama Agr. Society, Montgomery, 1888.

AWARD—Chattahoochee Valley Exposition, Columbus, Ga., 1888. HIGHEST AWARDS—St. Louis Agricultural and Mechanical Association, 1889.

GOLD MEDALS and 6 DIPLOMAS—World's Columbian Exposition, Chicago, 1893.

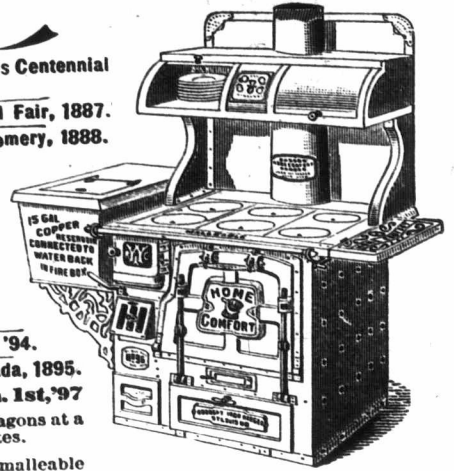
HIGHEST AWARDS—Western Fair Association, London, Canada, 1893.

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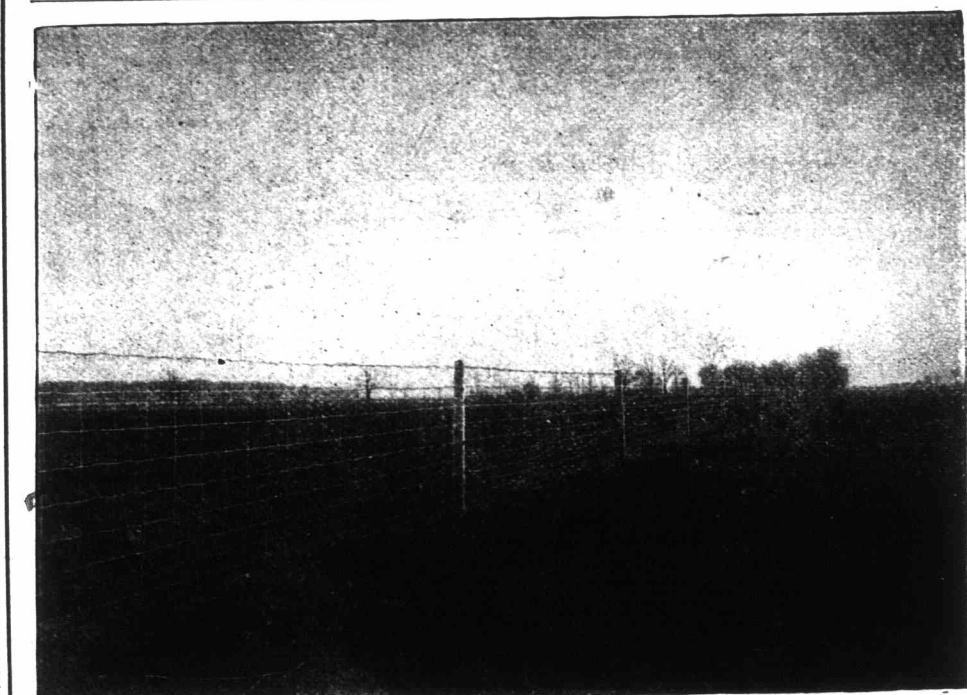


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PAGE WOVEN WIRE FENCING ON THE WALKER FARM, WALKERVILLE, ONT. The Page will never sag as long as the end posts stay in their places. It is made of a peculiar quality of hard steel wire, coiled. The fence in the above picture has been up a number of years, and is perfectly straight between posts. The Page Wire Fence Co., Limited, Walkerville, or their Northwest agents, The Rathbun Co., Winnipeg, will be glad to send illustrated advertising matter.

**Bookkeeping, Shorthand, Penmanship!** BUSINESS FORMS AND CUSTOMS, ETC., TAUGHT BY EXPERIENCED SPECIALISTS. *Central Business College.* Stratford, Ont. UNQUESTIONABLY the leading commercial school in Ontario. Graduates of other business colleges in attendance this term. STRONGLY RECOMMENDED BY FORMER STUDENTS. Up-to-date courses; moderate rates; board cheap; enjoys a splendid patronage; assists students to positions. Write for catalogue. WINTER TERM OPENS ON MONDAY, JANUARY 3RD, 1898. W. J. ELLIOTT, Principal. In writing Advertisers, mention "Farmer's Advocate."



NOTICES.

ISALEIGH GRANGE AYRSHIRES AND GUERNSEYS.

Three miles from Danville, Quebec, a first-class station on the Intercolonial Railway, 99 miles east of Montreal, in the beautiful Eastern Townships, is Isaleigh Grange, the 800-acre farm of Mr. J. N. Greenshields, the eminent advocate, of Montreal, devoted to the breeding and rearing of Thoroughbred and carriage horses, Ayrshire and Guernsey cattle, Shropshire sheep, and Yorkshire and Berkshire swine. The farm is pleasantly situated, rich in soil, well cultivated and conveniently laid out, with good roads leading through it, the sides of which are planted with maples, Scotch pines and Russian poplars. The buildings are extensive and well arranged, the main barn being one of the largest in the Dominion, measuring 165 by 90 feet, having stalls for 150 head of cattle and box stalls sufficient to make accommodation for 200 head, young and old, the stable being well lighted and provided with water in their stalls by a very convenient device planned by Mr. T. D. McCallum, the able and efficient manager, who has heavy responsibilities to carry, and does his work well. The short time at our disposal admitted only of taking hurried notes of the cattle in the stables, and of these we write briefly at this time, hoping to have an opportunity of a more leisurely inspection in the near future. At the head of the herd of Ayrshires stands the grand young bull Matchless, now about 3 years old, son of imported Glencairn 3rd and imported Nellie Osborne, first prize cow at the World's Columbia Exhibition. From such illustrious parents one might fairly expect a son of exceptional merit, and in this case the expectation has been fully realized in a bull of ideal dairy conformation, combined with all the indications of a robust constitution and strong breed character. He stands on short, straight legs well set under him, has deep and well-sprung ribs, fine withers, moderately long and very muscular neck, deep forehead, long, straight and level quarters, rich yellow skin and fine handling qualities, and will no doubt prove a valuable sire. In addition to a long list of excellent cows showing ideal udders and good dairy form, there is in the herd an exceedingly promising lot of young heifers, among which are half a dozen very select ones purchased at the recent sale of Mr. Robertson's herd at Compton. These, when developed, will make up a very strong herd of dairy cows. A few good yearling bulls and bull calves and an excellent aged bull, as well as a good 2-year-old bull, are held for sale and are worthy the attention of those in want of such.

The Guernsey herd is headed by three strong bulls, namely: Adventurer, 5 years old, imported from the Island of Guernsey, where he was a prize winner, as he has been at leading shows in Canada. He is a fine specimen of the breed, standing on short legs, deep in his ribs, rich in his color, and of fine dairy form. Ontario's Pride, in his 6-year-old form, winner of first prize and sweepstakes as best bull of the breed at the Montreal Exhibition, competing with the bulls in his class with which he was at Toronto, London and Ottawa. The third stock bull is Mr. Cowboy, a 3-year-old, imported this year from the herd of Mr. Bowditch, of South Framingham, Mass., and said to be richly bred and a good individual, but he had the misfortune to have his foot burned, the car in which he was being shipped having caught fire, which has seriously disabled him. Among the cows we noticed particularly imported Plotine 2nd, 4 years old, a fine type of a dairy cow, with rich yellow secretions, long, straight quarters and well-shaped udder. Trolley is another excellent cow, a great performer, we were assured; as also is Eliza C. 2nd, a cow of great capacity and fine dairy conformation. May Queen is one of the best breeders, her two daughters, Little May Queen and May Queen 6th, being very promising young cows. Isaleigh Princess, by Ontario's Pride, and Isaleigh Pride, a handsome 3-year-old cow, are a couple of cows which attract attention, giving much promise for usefulness. The heifer calves by Adventurer and out of May Queen and her daughter have fine quality and great udder development, and a very rich-colored and finely-formed heifer calf by Cowboy promises to make her mark in the future.

A large flock of Shropshire sheep was seen at a distance grazing in the fields, and the fine herd of Yorkshire pigs in the pens contained a lot of choice young things, as well as a good stock of breeding sows and boars bred from the best importations. Building operations have somewhat interfered with the regular work of the farm this year, but have left the farm well-equipped and ready for better and more extensive work in the future, and Isaleigh Grange will be in the swim next season in all the lines of stock represented there.

MANITOBA MORTGAGE AND INVESTMENT COMPANY.

Mr. R. J. Shrimpton, of Winnipeg, Manitoba, whose advertisement appears on the inside of our front cover, represents the Manitoba Mortgage and Investment Co., and has many excellent farm properties for sale in the Province of Manitoba. It is important to new settlers and others purchasing land that they should deal with trustworthy and responsible agents who will guarantee good title to properties purchased, and we can recommend intending purchasers of land in Manitoba to put themselves in communication with Mr. Shrimpton, who will furnish full information and lists of land post free.

BRANTFORD IDEAL WINDMILLS.

It seems unnecessary to refer at length at this time so soon after the extraordinarily favorable commendations of the Good, Shanley & Muir windmills as appeared in our Dec. 1st issue. When men have given a machine a thorough trial and with candor speak so favorably of it there can be but one conclusion to draw—that the machine is all right. The general verdict regarding the Brantford windmill is that the first expense is the last for a long time, and that so far as men has to do with running it amounts practically to perpetual motion, while it is furnishing a strong power.

THE CANADIAN AIRMOTOR

We wish to draw the attention of our readers to the now famous "Canadian Airmotor" as specially illustrated on back page of cover of this edition. It seems but a short time since one could travel through the country and see only a windmill here and there; but since the wider introduction of the "Canadian Airmotor" by the Ontario Wind Engine and Pump Co. of Toronto, who are the fortunate manufacturers of this machine, it is simply astonishing how many of our enterprising farmers have adopted this mode of power, and when we now look around and see hundreds of fine barns adorned with "Canadian Airmotors" the thought arises at once, "What there is that which is of still greater importance, viz., the great saving of expense in doing such work, as well as the convenience of doing it right on the farm, which means an addition to the farmer's profits on his work at the end of the year. To get reliable information regarding the "Canadian Airmotor," we have not only made enquiries direct from parties who are using them, but we have visited the Ontario Wind Engine and Pump Company to learn something as to the demand for these machines, and we learn that it has been so steadily increasing that the company have been compelled to build a large new factory with more than double their present capacity, which will be equipped with new and modern machinery to enable them to reduce the cost of manufacture, and thus give the farmers still better value by enabling them to buy the "Canadian Airmotor" as cheap or cheaper than ordinary machines of a similar kind, which are now being offered at low prices and represented as equal to the "Canadian Airmotor." The manufacturers of the "Canadian Airmotor" are the oldest firm in the business in Canada, having manufactured the Halliday Standard wooden windmill for many years before steel windmills were known or thought of. The company have very kindly placed their letter files at our disposal, and as a further proof of the success of the "Canadian Airmotor," we have culled a few extracts from letters of recent date received by them, which are as follows, viz.:

John Anson, Balsam, Ont., writes:—"I bought one of your 12-ft. Airmotor wheels, with Jollette's Grinder, last fall. I have ground 2,000 bushels of grain with one set of plates, and I have cut wood also with it. I find this mill all the agent represented it to be, and these people satisfactory in their dealings."

H. A. Allen, Vankleek Hill, Ont., writes:—"You will find enclosed a bank draft of one hundred and forty dollars. You will please acknowledge and send the receipt by return mail. I am highly pleased with the 12-ft. Airmotor purchased from your agent, Mr. Tate. It has given entire satisfaction in every respect so far, and will pay for itself in grinding alone in a very short time. It runs a 12-inch Massey-Harris cutting box with 19 foot elevators at its full capacity in a good fair wind."

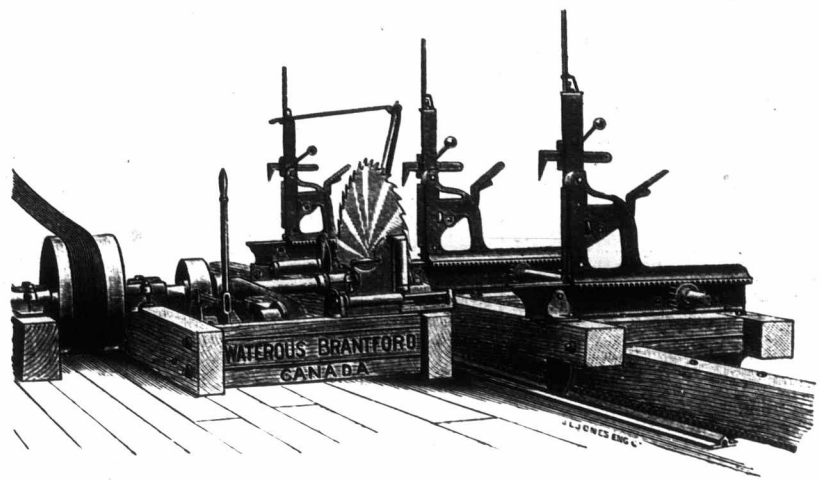
G. H. Alton, Appleby, Ont., writes:—"The 12-foot geared Airmotor I bought from you and put on my barn a year ago has given splendid satisfaction. Besides pumping the water for the stock and house it has ground four or five hundred bushels of grain, cut all the straw and corn stalks I fed last winter, sawed fifteen cords of stove wood, run the root pulper, grindstone, churn, and lathe. Thought it was expensive at first, but do not now."

It may interest some to know that this company are doing business all over the world, and ship their windmills to Great Britain, Germany, Italy, Roumania, Australia, South Africa, Siam, South America, Cyprus, and other places, and owing to the satisfaction given by previous shipments, the company have received as recently as November an order for three windmills for Tasmania, and in December a third order this season for six complete outfits for Cyprus. Any one interested in or having use for such power would "nd it to their advantage to write to the Ontario Wind Engine and Pump Company, at Toronto, for one of their large illustrated catalogues, which they mail free on application.

NOXON BROS., INGERSOLL, ONT.

"The old reliable, while ever progressive and up-to-date," may justly be atched as a fitting designation to the Noxon Bros. Co., of Ingersoll, Ont., who have since 1856 stood amongst the very foremost of seeding, cultivating and harvesting machinery manufacturers in Canada. Their "Hoosier" drill long since acquired a reputation much envied by many makers, and as years have rolled by such improvements as were practically advantageous have been cautiously added, so that this drill continues to lead. The lessons of experience, when accompanied by an honest effort to build up a trade, and still hold the old customers, makes such a company very safe to do business with; in fact, unless one has an assurance of this kind, his experience is likely to cost him something. It is not uncommon to see the sons of canny but shrewd farmers observing this, and buying their machines where their fathers did, knowing they must be right. In cultivating machinery the Noxon spring-tooth or diamond-tooth cultivator, with seeder attached, makes a strong lead for the purposes for which it is made. The various styles of spring-tooth and lever straight harrows fill a long-felt want, and are made on up-to-date and the Noxon reliable principles. Their light steel binders, strictly up-to-date, strong and easy-running, when introduced into a neighborhood are invariably followed by others. Where single reapers are used there are none more favorably known than the Noxon, while their different styles of rear and front cut mowers, as well as their ratchet dump and friction dump horse rakes, are in keeping with the Hoosier drill and their other machines. The Noxon improved clover table for attachment to the mower will save many times its price in the seed it

KEEP YOUR ENGINE AT WORK



THE cheapest thoroughly good Sawmill built in Canada. Solid wood frame, 3 bearings under mandrel, all conveniences of our solid iron frame, 3-block steel girder carriage, 50 feet track, spring receder, overhead set works, timber gauge. Price, with 48-inch saw, \$300, with liberal cash discount; arranged for 2 engines, \$20 extra. Capacity with 12 H. C. engine, 3,000 feet; 14 horse, 4,000 feet; 16 horse, 5,500 feet; 20 horse, 7,000 feet per day. Correspondence solicited.

WATEROUS, BRANTFORD, CANADA.

will save on very few acres of good ripe seed. It is with much assurance that we recommend the Noxon machinery to farmer in every land. Their announcement elsewhere in this issue will repay perusal.

ENGINES, THRESHERS AND SEPARATORS.

Fifty-two years in business and still leading means something in this age of invention and dispatch, and that is the record of the John Abell Engine and Machine Works, Toronto, Ont. Their Advance threshing engines do what they are designed to accomplish, standing unrivalled in any country. While they will run threshers of any good design, their companions, the latest improved "Toronto Advance," with cyclone stacker, and Parsons band-cutter and self-feeder, will do work never dreamed of a few years ago. The stacker is filling a long-felt want, as it can be extended to any desired length, run at any angle, and take all the dust out of the barn; not only that, but all the trouble to keep the rakes in order is done away with. The band-cutter and feeder are together a perfect success, doing better work with fewer men than could be accomplished in the old way. With an Abell compound Advance traction engine and the latest improved Toronto Advance separator one can face an enormous season with an assurance of success in Manitoba or in any other country where grain threshing has to be done with dispatch and thoroughness. The third machine advertised by the Abell Co. in this issue as belonging to their quartette of specials for 1898 is the Improved Victor clover huller. This machine has long stood in high esteem, and as nothing succeeds like success, its progress has been even more marked during the last few years. It takes out all the seed, and does it rapidly. In this age of narrow margins and need of saving at every turn the Abell Co. have shown wisdom in adding to their old lines of manufacture a reliable cream separator. Like their other separators, it separates thoroughly. The "Javis" is a good machine that has proved its efficiency. The John Abell Company's business experience and reliable record make it a desirable firm to do business with.

WHERE TO LOOK FOR GOOD LAND.

Parties desiring to rent or purchase farm lands anywhere in Manitoba, Assiniboia or Alberta, would do well to correspond with Messrs. Oeler, Hammond & Nanton, 381 Main Street, Winnipeg. We have just been looking over one of their latest land parcels, which are given some marvelous instances where one good crop buys the farm. The figures given simply show that with the wonderful fertility of our soil, and the unequalled opportunities offered in this country, any industrious, level-headed farmer can achieve his independence in a very short time. As figures speak louder than words, we quote a few from this pamphlet:

Table showing price of farm and proceeds realized from 1896 crop:

District.	Sale No.	Acres.	Price 1895.	Crop 1896.	Terms.
Alexander	139	160	\$1,300	\$1,050	1/2 crop
Hartley	140	160	1,150	762	1/2 crop
Douglas	126	160	1,200	619	1/2 crop
Hornby	148	160	500	359	1/2 crop
Melita	106	320	2,200	2,064	1/2 crop

The following are from farmers who bought their land a few years earlier, and have their soil in a better state of cultivation. Table showing the original sale price of the land and returns from the 1896 crop of grain alone:

Sale No.	Acres.	Date of Purchase.	Price of Land.	Value of 1896 Crop.	Acres in Crop.
169	320	1891	\$1,920	\$4,092	200
176	320	1891	1,920	3,300	250
39-149-157	640	1889-90	2,380	3,301	288
168	160	1891	960	1,298	124
165-195	320	1891-2	2,000	5,124	340
145	320	1889	1,600	2,920	165
166	1891	960	5,650	350	
207	160	1893	960	1,157	100
194	160	1892	960	3,540	230
O. 140	320	1889	1,200	3,780	340

\*And Homestead.

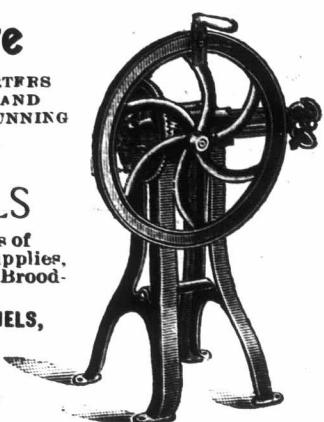
We are

HEADQUARTERS FOR EAST AND WEST RUNNING

BONE MILLS

and all kinds of Poultry Supplies, Incubators, Brooders, etc.

C. J. DANIELS, 221 RIVER ST., TORONTO, ONT.



DEERING MACHINERY IN CANADA.

The Deering Harvester Company, of Chicago, Ill., an establishment covering over 62 acres and employing more than 3,500 shop hands, is one of the most striking examples of a remarkable industrial age, having, it is said, capacity for turning out one machine and 30 miles of twine every minute. During the past three years they have only been able to close down for one week, so great has been the demand for Deering machinery from all quarters of the globe. Or to illustrate the idea in another way, during the past year no less than 14,000 cars of raw material was shipped into the works and finished products sent out. The company are pushing their trade with intelligence and vigor into various countries, the Dominion of Canada among the rest, particularly the Province of Ontario, where they began in 1896 in a quiet way. Encouraged by the result, however, they set in during the present year and sold over 3,000 Deering binders, mowers, rakes, and corn harvesters, paying thereon a duty of more than \$45,000, and in 1898 will probably see the number imported run up to probably 5,000. The company will have at work in the Province of Ontario alone during the coming season some 300 local agents. Mr. H. H. Hannan, of London, Ont., is the general manager for this Province.

The business of the company recently attained considerable newspaper notoriety through the report of a Court of Revision case at London, when Mr. F. G. Bomley, the local agent, appealed against a personal property assessment of \$1,000, levied on the stock at his King-street premises, where, as he told the court, there was only about \$100 worth of stock, which, while correct, was soon spread abroad in the form of a story that the company kept practically no stock of repairs at their "Provincial headquarters" in London; where, as the latter are in commodious premises at 225 York street, stored with new machinery, tons of twine, and carloads of repairs, though, as Mr. Hannan laughingly remarks, "The Deering is so good that we might do with fewer repairs." The company have also at Toronto and Ottawa large, well-stocked warehouses, supplied with all the necessities for a large and growing trade. "We have no objection to fair competition," states Mr. Hannan, "but let no one run away with the idea that we're here to-day and gone to-morrow. We're here to stay, and by giving the Canadian farmer a high-grade machine at a reasonable price and dealing out fair treatment to him, have no misgivings about the result. Our success this season settles that point for all time to come."

The Globe, of Toronto, issued as a supplement a beautiful 44 page Christmas number, with a cheery illuminated cover, and more than half a hundred photo-engravings within. The introductory article, entitled "Keeping Christmas" is from the gifted pen of Prof. Goldwin Smith. There is an admirable article describing the advantages of Western Canada, and another on the "Riders of the Plains," the Mounted Police. Throughout, the number is seasonable and entertaining.







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