

J. H. Grisdale
Exp. Farm, Oklawaha
2 Feb 20, 1900

MANITOBA AND WESTERN EDITION

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

FOUNDED 1880

PERSEVERE
SUCCEED

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

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VOL. XXXIV. LONDON, ONTARIO. NOVEMBER 6, 1899. WINNIPEG, MANITOBA. No. 489

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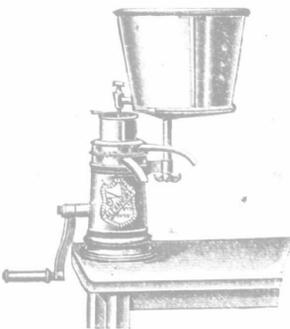
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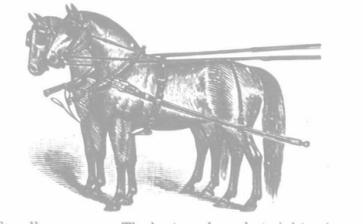
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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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VOL. XXXIV.

LONDON, ONT., AND WINNIPEG, MAN., NOVEMBER 6, 1899.

No. 489

A Correction Regarding the Importation of Cottonwoods.

To the Editor FARMER'S ADVOCATE:

You have made a mistake in editorial, on "The Importation of Cottonwood," 1st page of last issue of ADVOCATE (Oct. 20th). Instead of cottonwood proving disappointing in avenues, it is *Populus perotenses*. The cottonwood in the avenues and elsewhere, so far have done extra well. A few were cut back a little last winter, but soon got over it. The poplars are being replaced by elm. Please make correction in next issue.

I think it would be well to caution those buying cottonwoods from Dakota, to obtain them as near the boundary as possible, as more southern trees kill back for several years. Yours truly,

ANGUS MACKAY, Supt.
Indian Head Experimental Farm.

Eastern Nursery Fruit Trees.

The report is going the rounds of the local press that six carloads of Ontario nursery stock has been distributed throughout Manitoba this season by one firm alone. Doubtless a very large proportion of this nursery stuff has been apples, pears, cherries, and the more tender plums, with a sprinkling of grape vines, rose bushes, etc. It's the old story, people do love to be fooled, and the silver-tongued fruit tree pedlar, with his sample book of pretty pictures, can fool people as slick as any one. We have known people living on farms adjoining those where the very best object lessons of the absolute worthlessness of nearly every kind of fruit tree from eastern nurseries could be seen, give good, liberal orders to the tree pedlar, and then go to the trouble of preparing ground and setting out their worthless purchases. The desire to have fruit trees is most commendable, but a little bit of consideration along with the desire would save good money and much disappointment. Time and again have articles from the best experts in the country on the subject of fruit growing appeared in the ADVOCATE, but, as said before, people like to be fooled.

A Growing Time Indeed.

From month to month we read figures in an astonishing array, showing the growth of Canadian trade. From ocean to ocean progress and advancement are the order, and nowhere more marked than in our prairie provinces. The grain yields, although not equal to the over-sanguine estimates of some enthusiasts, are still abundant, and the average quality high. Still, almost every district has had most emphatically demonstrated, once again, the unwisdom of depending altogether on wheat. Hail, frost, wet harvest weather, and now Hessian fly, are contingencies that must be reckoned with. With the marvellously rapid development of the vast mineral resources of British Columbia and Northwestern Ontario, there has grown up a demand for the products of the farm far beyond our present available supply. Large numbers of horses have been drawn from Alberta ranches to work on railroad construction in the Kootenay, and in teaming supplies and ore between the mines and the railroads. This market has proved a boon to the breeders of heavy horses. The cattle and sheep markets are also benefited by the demand from this same source, while in pork product, domestic fowl, butter, cheese, eggs, etc., Manitoba and the territories cannot begin, as yet, to supply the demand. Carloads of these products have been going right across our provinces, from Ontario to British Columbia, all season. Prices for these products are high, and there is no good reason why the money thus created by their production, should not go to the building up of our prairie homes. And there is no doubt but that future development will be largely along the lines of more general farming. As the conditions of the different sections of country become better understood, the various branches of farming and stock-raising will be developed along

permanent lines. In the wheat districts proper, the necessity of seeding down to grass being recognized, and adopted, will lead to the breeding of stock, probably horses and beef cattle, and in the district where wheat is grown in limited areas, dairying and hog-raising will doubtless find a permanent abode. This year affords a most favorable opportunity for laying foundations of herds, flocks or studs, or adding to what has already been done. Hay and fodder is plentiful, except in a few localities that have had the misfortune of being devastated by prairie fires. Feed grains are also abundant. The breeders of pure-bred stock, encouraged by the brighter prospects, added to and improved their herds and flocks very greatly during the past year, and now are in better shape than ever to supply all demands. There is every indication that a good share of the capital received for wheat this year will be devoted to the purchase of stock, and preparations for giving them the best of care. That we can grow wheat, and of the very highest quality, has been demonstrated beyond peradventure; but that we can grow just as much wheat in the aggregate, and in addition, have a good, safe income from stock raising, also goes without saying.

Preparing for Winter.

It is at this time of year, perhaps more than any other, that the truth of the old saw, "the best laid plans of mice and men gang aft aglee," is borne in upon us. Plans had been made which, if carried out, would have found us all ready for winter. But, through no fault of our own, the threshing was not got over with as we had calculated, the wet weather caught us in a most inopportune time, some of our help left us, or some other equally reasonable thing happened, and the consequence is, many a man is caught unprepared for winter.

Those having permanent stables, with lofts and feed granaries, which are well-filled, have not so much cause for anxiety. It is the majority who are still "getting along" with temporary shacks, whose work is apt to get so behind as to interfere with the whole winter's work and the profit of stock-raising.

Many a farmer, as well as men in other professions, is sadly lacking in business ability, in arranging and carrying out with promptness the varied tasks that follow each other throughout the season. It is every man's duty to discover his failings, and, knowing by the experience of this year that he has lacked forethought or judgment in carrying out the season's operations, to avoid being caught again in the same box.

It is easy to estimate the gain to each farmer, and to the Province as a whole, by the reduction of one cent per bushel on our export freight rates, but who can estimate the loss to individual or Province that takes place every fall, in most cases avoidably, through the livestock being left out on wet, cold, or frosty nights, or to wander over snow-covered stubble fields in search of food. The shrinkage in flesh, and the check given to the growth of young stock, is unnoticed by many unoblivious farmers, but the avoidable loss, occasioned by lack of a little timely care of stock in the fall, is simply incalculable.

Another common source of loss is caused by inadequate and inconvenient stabling accommodation. In the feeding, watering of stock, or cleaning of stables, a half an hour or an hour's extra time two or three times every day all through the winter is required, on account of some little inconvenience in lay-out or equipment of the stable, that a few hour's work or small outlay of money would obviate for all time to come. Disease and loss are frequently occasioned by over-heated, badly ventilated stables, or unsanitary conditions, lack of drainage, rotting floors, covering a mass of decomposing filth of the most stinking kind. These things can all be seen to *avoid*. An owner of pro-

vention is worth a pound of cure." During the past year or so the mortality among horses has been very great, a sort of typhoid fever being the most common malady, caused, doubtless, by contaminated water and from the impure air of old rotten stables, from under the floors of which foul gases are continually emitted.

Hundreds of fine barns have been built throughout the country during the past two years, but in a good many the mistake has been made of putting in plank floors, leaving an undrained cesspool underneath, which becomes more deadly every year.

The ADVOCATE will be glad to have an open discussion of barn plans and stable floors, and will, as usual, publish, during the winter months, plans of many improved barns, etc.

There are other things, too, that require attention at this season. Some of the older children could be given a few month's schooling, by which they would be greatly helped in their life's work, whether on the farm or elsewhere. And now that the day's work is shortened and the evenings lengthened out, attention should be given to the supply of reading matter that comes to the home. See that there is plenty of it, and that the *quality* is of the highest.

The ADVOCATE promises no abatement in its efforts to maintain the high standard it has attained in agricultural journalism. The present year has been a most successful one. As evidence that our efforts to furnish the farmers and stockmen of Western Canada with original, reliable and up-to-date matter, our circulation has enormously increased, but every reader can do something to help us in improving and widening our circle of usefulness, either by contributing articles helpful to others, or by getting a few new subscribers.

The Dairy Industry.

Mr. R. A. Lister, President of the R. A. Lister Company, Limited, Dursley, England, manufacturers of the Alexander Separator, well known in nearly all countries throughout the world, and particularly well known in Canada, has just completed his annual visit to Manitoba and the Northwest Territories, extending his visit at this time to the Pacific coast. To a representative of the FARMER'S ADVOCATE, Mr. Lister expressed himself as most favorably impressed with the agricultural outlook of Western Canada this season. After having annually visited this country for a number of years, Mr. Lister is more than ever convinced that mixed farming and dairying is the only ultimate road to agricultural prosperity. He points out that Manitoba has not taken the full advantage of her opportunities for supplying the mining markets of the west with dairy products, and considers that more attention to this industry, together with hog raising, would bring surer and ultimately more satisfactory results to the farmers of Western Canada. The creameries operated by this firm at Morris and Brandon have had a satisfactory season, the output of the latter being 65,000 pounds of butter.

The modern centrifugal cream separator has rapidly displaced old methods of cream separation in almost every country in the world where dairying is being carried on, and this wealthy firm of cream separator manufacturers have built up a very extensive trade in different parts of the world, principally in South Africa, portions of India, and France, besides their Canadian trade and extensive home trade. In Great Britain during the past season, the average sale of Alexander Separators has averaged about 150 per week, which is ample evidence that this strongly-built, clean-skimming and cheap machine is holding its own against all comers. Mr. Lister showed us an order which he had taken with a Manitoba creamery man for 810,000 worth of his separators—doubtless the largest order ever placed for cream separators in Western Canada. This order included the small-sized Alexandras and the Melottes. The Melotte machine being handled by this firm is generally recommended where machines of the larger capacity are required.

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN
THE DOMINION.

PUBLISHED BY
THE WILLIAM WELD COMPANY (LIMITED).
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1. THE FARMER'S ADVOCATE is published on the fifth and twentieth of each month. It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical, and reliable information for farmers, dairymen, gardeners, and stockmen, of any publication in Canada.
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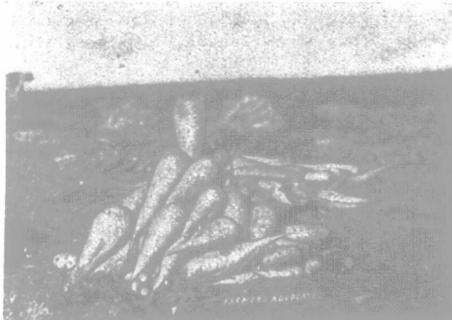
In order to advance the subscription lists of the FARMER'S ADVOCATE past the 50,000 mark, we are willing to sacrifice money on what might be called trial subscriptions. To accomplish this we make a proposal which we think must appeal to every reader as a fair one. It is simply this: That you send us the names and P. O. addresses of two new subscribers and \$2.00 and we will advance your own subscription one year and mark the *new* subscribers paid till the end of 1900. We are quite satisfied that every present subscriber would gladly see the helpfulness of the paper extended to others, and also that a very slight effort on his or her part in any locality will secure the two new names. This is a case where your effort will prove a triple benefit—to yourself (*a free paper for next year*), to your neighbor, and to the paper itself, by enabling us to carry out more completely the arrangements we have made for improvements in the FARMER'S ADVOCATE for 1900. Heretofore our promises have been made good, and we propose to do still better for our readers in the future. We therefore ask you not to delay, but secure the two new subscribers at once. Another point: You are authorized to offer gratis to the new subscribers for 1900 the balance of the issues for the present year (1899), including the superb Christmas number, the price of which to any subscriber is 25 cents. You may save on your present subscription a fair and reasonable sum by sending us a few copies of the paper to new subscribers. Address—The William Weld Company, Winnipeg, Manitoba.

Field Roots at Indian Head.

The result of tests with field roots at the Indian Head Experimental Farm have been most satisfactory. In carrots, the yields have been particularly large, and the largest and best crop of these roots ever grown on the farm has been harvested this year. The soil on which they were grown, and the season, seems to have been particularly favorable. They came out of the ground clean and smooth, and very free from root fibres or blemishes. An illustration of a field pile of the best varieties, Iverson's Champion, taken as they were being pulled on October 4th, is published in this issue.

The yields of the 10 best varieties of each of the standard roots is given below:—

Variety.	1st Seeding, May 20th.		2nd Seeding, May 27th.	
	Per Acre. Bush.	Lbs.	Per Acre. Bush.	Lbs.
MANGELS.				
Gate Post.....	987	15	1295	15
Yellow Intermediate.....	1199		756	15
Giant Yellow Globe.....	957		1006	30
Norbitan Yellow Globe.....	921	15	1042	15
Champion Yellow Globe.....	1069		613	15
Ward's Long-Oval.....	1012		836	
Giant Yellow Half-long.....	922	45	734	15
Giant Yellow Intermediate.....	811	15	819	30
Selected Mammoth Long-red.....	968		684	15
Lion Yellow Intermediate.....	847		888	15
TURNIPS.				
Mammoth Clyde.....	852	30	745	15
Bangholm Selected.....	981	45	731	30
Purple-top Swede.....	855	15	613	15
Halewood's Bronze-top.....	904	45	704	
Drummond Purple-top.....	841	30	651	45
Perfection Swede.....	816	45	830	30
Marquis of Lorne.....	759		555	30
Champion Purple-top.....	704		624	15
Selected Champion.....	783	45	764	30
Hartley's Bronze.....	726		717	45
SUGAR BEETS.				
Danish Improved.....	742	30		
Vilmorin's Improved.....	437	15		
Wauzeleben.....	530	45		
New Danish Improved.....	453	45		
Red-top Sugar.....	343	45		
Improved Imperial.....	429			
CARROTS.				
Improved Short White.....	654	30	511	30
Iverson's Champion.....	643	30	511	30



SAMPLE OF PILE OF FIELD CARROTS,
IVERSON'S CHAMPION.

Six hundred and forty-three bushels and thirty pounds per acre, grown on Experimental Farm, Indian Head, Assa.

Half-long White.....	695		599	30
Short White.....	577	30	275	30
Yellow Intermediate.....	566	30	478	30
Giant White Vosges.....	569	15	407	30
Ontario Champion.....	558	15	489	30
New White Intermediate.....	550		451	
White Vosges.....	552	30	404	15
Green Top White Orthe.....	547	15	467	30

C. P. R. Free Stock Distribution.

A prominent breeder, writing under recent date in reference to the C. P. R. free transportation of pure-bred stock, says:—"The idea suggested by Walter Lynch in his letter, which appeared in the FARMER'S ADVOCATE of October 5th, of lowering the rates according to grade, would never work practically. The idea is O. K., but it would necessitate an inspector, with his hand behind his back all the time, to be *insulted with the filthy lucre*. It is not as if they were sold on an open market, like Liverpool or London. Mostly all are bought before shipped by a shipper, and distributed later to different markets, according to demand, weeding the worst at Winnipeg, Toronto, and Montreal, for home consumption, and later for the manufacturing centers. It is possibly a thing that the Dominion Government might take up, but not the railroads. Such as 100 best, *i. e.*, highest priced steers, sold by any shipper during each of the five shipping months, with a substantial bonus and a correspondingly good introduction to English trade.

Mr. Lynch proposes discussion at the annual meeting, or sooner. Probably any time now would suit most breeders, as threshing will be generally over, and it will do no good "crying over spilt milk." Supposing "missionary" efforts are a failure, and they run in a train load of culls to be given away on the strength of a fair shipment previously, it is a case of howl now or keep quiet. Breeders have a grievance, and could memorialize the C. P. R. to that effect."

Cartwright Farmers' Elevator.

The Cartwright Farmers' Elevator Company has recently been gazetted, with the following incorporators:—A. C. Clark, James Stancombe, James McKenzie, Robert Robertson, R. F. Moore.

Draft Horse Breeding.

BY A. G. HOPKINS, V. S., WISCONSIN AGRICULTURAL COLLEGE,
LAWS OF HEREDITY.

The science of breeding, as related to its laws, "What's bred in the bone, etc.," and the adage, "Like produces like," is a theory so well borne out in practice as to be the cardinal feature in horse breeding, as the ignoring of it is the rock on which many a breeder, with high hopes, will founder. The average farmer of the present day admits the stupidity of using the scrub male bovine as a sire, and yet forgets that in the breeding of an animal higher in the scale of evolution, the same principles must be observed. The utility of the horse depends on his contour, speed, intelligence, weight, soundness, docility, *et al.*, the absence of any of these desiderata impairing his value greatly; not so in the bovine, at least in a lesser degree. Yet, by many the scrub stallion, on account of his small fee, is used, a case of penny wise, etc., policy, with results disastrous to the breeder, his locality, and his country. Still, one does not wonder at such ignoring of the laws of breeding, because as we go higher in the scale—Man—we find a total disregard of such laws, with its resultants of disease, deformity, imbecility, and crime. In Holy Writ we are given the theory of heredity in a few words, "The sins of the father, etc.," and a close study of history gives us testimony that it is irrefutable. Atavism and variation are dependent to a great extent on the preceding law, and also on the methods followed. Breed to type and for type! In-and-in breeding is not the menace to the horse breeder that it is to the cattleman, owing to different conditions; yet, the indulgence to excess in such methods will bring harm to the horse breeder. In-and-in breeding tends to conserve the type, and for this purpose may be used judiciously. Again, one must remember that in fixing a type, unsoundnesses are just as firmly fixed as good qualities. The general farmer-breeder will either follow line breeding or cross breeding. It must not be forgotten that in cross breeding the chances of variation from the desired type are greater than in the other method. *In breeding, we have the founding of individual differences in a common offspring, while complexity of the inheritance gives instability to the embryo, and thus the liability to variation in the offspring.*

SELECTION OF SIRE.

As we leave the theoretical for the practical, we are confronted with the duty of the selection of the sire. As the sire has the property of giving at least half the inheritance, and sometimes more, depending on his prepotency, it behooves one to use every care in his selection. Virility, not necessarily coarseness, must be evident; stamina and good constitution, evidenced by deep, wide chest, clean throat, deep, well-rounded barrel, tightly ribbed up, muscles well-defined; size and shape—16.3 to 17 hands tall, 10½-12 inches of bone below the knee, broad, long, deep, square joints; weight, 1,800-2,000 lbs.; short, strong neck, blending well with shoulders, which should be fairly upright; short, strong back, wide, strong loin; strong dock, well buttoned-up (the anus being closed); feet, strong, large, round, and flinty; bone, flat and compact. Activity and intelligence shown by the broad forehead, bright, large eye, head free from meatiness (meaty-headed horses are often *dummies*, a pathological condition resulting from previous brain trouble); active ears. Action strong, free, and elastic, perfect flexion of hocks and knees when trotted, picking the feet well off the ground; the generative organs large, tense (evidencing tone), and normal. The size should be the greatest possible commensurate with the type. Color:—It has been said a good horse is never a poor color; still, the solid colors are to be preferred, especially as the markets show that preference. The sire should be a good walker, although short-limbed.

THE DAM.

The dam should be of good size, low down to the ground, and, as in the sire, free from hereditary unsoundness; the general description as used for the sire will apply to the dam, only she should be wide in the hips, with a large barrel, so as to allow plenty of room for the generative organs during gestation. More quality or sweetness is allowed in the dam than in the sire, such quality not being incompatible with females. As the period of oestrus occurs about every twenty or twenty-one days, the time of mating will necessarily depend on its appearance, as a rule. The matron, already foaled, should be tried nine days after foaling, and can usually be again put in foal at that time.

MATING.

The process of mating should only be entrusted to capable, strong grooms, and the mare if at all irritable should be hopped, either one or both hind legs. The stallion should be so trained that a proper service is given, or damage, sometimes irreparable, will result to both. If the stallion has a heavy season the teasing can be done by an inferior entire horse. A two-year-old stallion should not have more than twenty mares in a season, while aged horses have been known to serve over one hundred during the same time. Mares should be returned to the stallion once every two weeks, and can then be tried. The stallion should be limited to four services a day, and at least one hour between services. His food should be of the most nutritious character, as the tax on his system is severe; for this purpose whole oats cannot be surpassed, and if he will drink milk, so much the better. If the stallion

has been recently imported, he may prove infertile until acclimated, and if put to too many mares the same result will occur. In purchasing a stallion it is always advisable to find out as to his power of procreation. Examination of the semen microscopically might also be of some assistance. Unless in very valuable horses, for whose services there is a great demand, artificial impregnation will not be needed. The procedure is very simple, consisting as it does in one mare being served by the horse, and the semen being dipped up in gelatine capsules, the mouths of which are closed by the finger, the several capsules being introduced immediately into the wombs of the several mares which it is desired to impregnate. Some breeders practice blood-letting immediately before a service, and with good results. These breeders hold that conception is rendered more sure by such methods. Mating is usually done in the spring or fall, according to the facilities of the breeder for raising spring or fall foals. If a breeder possesses good barns with ample boxes, the practice of having the foals come in the late fall is to be recommended, especially so if the breeder wishes to work the mares heavily in the spring, and if he has plenty of good, succulent food.

Rapid Handling of Grain.

Among the items of interest to Canadians connected with the commerce of Duluth, is the rapid loading and discharging of cargoes. The fastest elevators load grain into vessels at the rate of 1,000 bushels per minute, and one of them recently loaded an 80,000-bushel steamer in one and one-half hours, including tying-up and leaving the dock. Recently a 180,000-bushel steamer lying at anchor in the bay at noon had returned to her anchorage at six o'clock, having taken on her cargo in the interim. The Duluth Superior railroads recently discharged 2,000 carloads of wheat in twenty-four hours. Iron ore is handled equally as rapidly at the ore docks, while the Great Northern's famous Buffalo elevator, built of steel, has 3,000,000 bushels working capacity and 4,500,000 bushels storage capacity, and is claimed by the Great Northern to be the most complete modern elevator in the country, as well as the largest.—*Trade Review.*

Meeting of Grain Standards Board.

The Grain Standards Board met in Winnipeg on October 25th, to fix commercial standards, made necessary by frost in some sections of the country. The following three grades were struck:—
No. 3 hard is a clean, hard wheat, with from 25 to 30 per cent. frosted.
No. 1 frosted, a clean grain, frosted, but retaining its brightness.
No. 2 frosted is a heavily frosted grain, which has lost its bright color and is dark. Both 1 and 2 frosted are required to be reasonably clean to grade. The members of the Board that were in attendance were:—Messrs. S. Spink, chairman; F. M. Young, Killarney; C. A. Young, Winnipeg; S. A. McGaw, Winnipeg; W. B. Underhill, Melita; Kenneth Campbell, Brandon; R. M. Phin, Moosomin; C. Johnson, Baldur; John McQueen, Carrievale, and George McCullough, Souris.

Why There are No South American Cattle.

A special correspondent of the *Times*, writing from Buenos Ayres on 20th August, says that recent statistics show, under existing circumstances no less than 25 per cent. of the value of the cereal crops is absorbed by taxation imposed in one form or another by the national, provincial and municipal authorities. In the matter of cattle brought into Buenos Ayres for shipment abroad or sale for consumption from districts at no great distance from the city, the various taxes to be paid before an animal is sold sum up to \$10 per head. This condition of affairs cuts all profits for the farmer. The effect of high protective duties on one hand and excessive taxation on the other restrains the natural tendency to expansion and restricts in all directions the prosperity that should ensue from the wealth of a fertile soil and beneficent climatic surroundings.

In a private letter to this office, a farmer in one of the large wheat districts writes, under date of the 23rd of October, as follows:—"Farm work up this way is not very satisfactory just now. The snow and thaw have been a great drawback, and hundreds, if not thousands, of acres are still in stook in this district. Last year, with its bad fall, did not teach farmers anything, but I think many are pretty sick now." This state of affairs exists to a very large extent through some of the large wheat sections in Southwestern Manitoba, and also in Central Assiniboia, where wheat farming is carried on on a large scale. Banking on the supposition that the bad fall of 1898 would be followed by a favorable one, many farmers ran the risk of leaving their wheat in stook this year, waiting for the threshing machines, with the result that the snow-storm of the second week of October caught thousands of acres of grain still in stook, much of which might have been stacked. It is to be hoped that this grain will not be seriously bleached out, and that the loss will not be serious; but repeated lessons of this kind ought surely to convince wheat farmers of the necessity of taking greater precautions to secure their crops in better shape.

Wintering House Plants in Cellar.

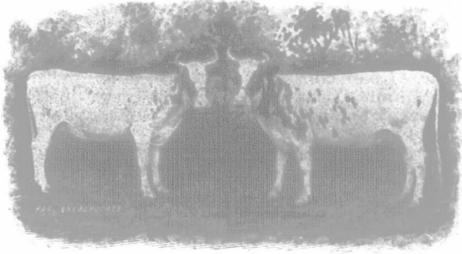
A Balmoral subscriber writes that he has tried different methods of keeping flowering plants over winter, putting them dry in the cellar in pits, and hanging them up by the roots to the ceiling of the cellar, but he has met with failure, and desires advice that will lead to more satisfactory results. The subject is dealt with very fully in the following letter:—

To the Editor FARMER'S ADVOCATE:

"The problem of wintering plants in the cellar, is a rather difficult one for which to lay down a fixed set of rules, chiefly on account of the great variations in the atmospheric conditions of cellars. Some of these are quite damp, while with others the conditions are exactly the reverse, so that the chances of success depend largely on studying the special features of your particular cellar.

From the method of treatment described in the above question, I would say that hardly any other result could be expected than the unsatisfactory one mentioned; for by giving the matter fair consideration, it will become obvious to anyone that the method of hanging up a plant by the roots to dry, is certainly not conducive to its longevity, and decidedly at variance with nature's laws, so that it can hardly be wondered at, that utter failure would result from such a course of treatment; and similarly in the case of drying them out in pots, though perhaps in a lesser degree.

In greenhouse treatment of wintering fibrous-rooted plants, such as geraniums, fuschias, and others of a similar nature, when the resting period arrives, the pots are laid on their side underneath the stage, where they remain until the time arrival when growth commences. They are then brought out to the full light, and placed in position on the greenhouse bench, where they are allowed to remain until growth has fairly commenced. The plants are then removed from the pot, the old soil shaken off, and fresh soil given, reducing them to as



PAIR OF GRADE AYRSHIRES, BY ORPHAN BOY.
1. Rena, three years, winner in grade dairy class at Ottawa, 1899, against all breeds, at fourteen months in milk. 2. Snowflake, two years, won first in same class, all breeds competing.
OWNED BY H. J. WHITTAKER & SON, NORTH WILLIAMSBURG, ONT.

small a pot as possible. From that time, of course, the repotting goes on when necessary. To properly winter house plants then, this treatment must be followed out as closely as possible. One point I wish to emphasize is that, although the plants are laid upon their side in order to avoid receiving an excess of water, during the resting season, yet care is taken to go over them several times, in order to ascertain if the soil is becoming too dry, and should this be found to be the case, a liberal splashing of water is accorded them. From this fact, the fallacy of hanging up plants to dry, or even allowing them to remain dry in the pots all winter, will be readily discerned. But (in order not to be misunderstood), while I wish to point out the necessity of a certain amount of moisture being necessary, yet the opposite extreme must be just as carefully guarded against; and it is in being able to make a nice distinction between the two, that much of the success in wintering house plants depends.

The foregoing remarks apply specially to fibrous-rooted plants, but for those of a bulbous character, different (in fact nearly opposite) treatment is necessary. In wintering tuberous begonias, cyclamen calla lilies, and other bulbs of a similar manner of growth, the plants should be left in the light until the stems or foliage show signs of falling off. Water should then be entirely withheld, and as soon as they are defoliated (by which time the soil will be quite dry), they should be removed to a dark cupboard, and left there until the period for starting again comes round, at which time the same potting treatment as that previously advised for fibrous-rooted plants, may be followed. In conclusion, the cellar should have a window if possible, if only a small one, as a certain amount of light is almost, though not absolutely, a necessity. If, coupled with this, a temperature of about 40° Fahr. can be maintained (a trifle higher will not make any material difference), you will have an ideal cellar for wintering plants; and, if the foregoing advice is fairly followed out, you will have no cause to complain of non-success in this branch of the laudable and interesting occupation of wifidow gardening.

HARRY BROWN.

Brandon Experimental Farm.

Advice on Home Dairying.

To the Editor FARMER'S ADVOCATE:

SIR,—I am in receipt of your letter requesting me to answer the following inquiry:

"A READER, Craven, Assa.:—'Am about to start a dairy here in the Qu'Appelle Valley, principally for butter. What is the best method of keeping butter during hot weather, and how should it be packed? Is there a market in Winnipeg for butter all the year round at prices to pay one to ship it? And what breed of cows would you recommend? Any information on these topics would be gladly received.'"

Butter will not keep in good condition and retain its fine flavor for any length of time, unless held at a low temperature—well down to 32 degrees, and this means the use of a refrigerator in summer. Of course, if possible, it is best not to hold butter, but rather to put it onto the market as soon as possible after it is made. Plans and instructions for the construction of a refrigerator, on a small scale, may be obtained free upon application to the Agricultural and Dairy Commissioner, Ottawa. The length of time that you purpose holding your butter will help you to decide whether you need to build a refrigerator or not. Possibly something of the nature of a cabinet cooler will be sufficient. The more salt, and the larger the package used, the better the butter will keep; but both of these must be gauged to suit the requirements of the market. We would never advise putting butter up in print form, if it is not going into immediate consumption.

Butter may be packed in square boxes, holding fourteen, twenty-eight, or fifty-six pounds, or in tubs; or it may be put up in pound prints. The demands of the market you are catering to must here, as in the case of salting, be complied with. Whether boxes or tubs be used, they should be lined with heavy parchment paper soaked in strong brine for a day before using. After lapping the paper over the top of the package, it is advisable to put on a light salt paste. This prevents the butter from spoiling at the surface. Where butter is put up in print form, we prefer the oblong prints, or "bricks," as they are commonly called.

There is no doubt but what ready sale could be found in Winnipeg for butter of good quality. We would advise seeking a special market, and then aiming to discover and please the likes of your special customers, as regards flavor, color, salting, etc. After finding these out, aim to make butter not only of good, but also of uniform, quality. A special market, while it is invariably the most profitable, is also the most critical; but when it obtains that which it wants, is usually willing to pay for it. It demands not only fine quality, but uniformity as well, in a product, and, of course, a neat and attractive package.

Before concluding this part of our answer, we would strongly advise patronizing a creamery, if there is one within reach of you. It saves the women folk on the farm an immensity of labor, frequently amounting to drudgery; and, generally speaking, it is more profitable. For instance, the Northwest creameries promise this season to net the patrons fully 16 cents, or better, after paying the cost of manufacturing. Furthermore, it is a duty that we owe to our infant dairy industry, and to those who are trying to build it up, to patronize the creameries; for it is only through co-operation that we can hope to make dairying occupy the place that it should in Northwest farming. In the old Province of Ontario they have long since learned that the greatest success is attainable only through co-operation.

As to the best breed of cattle, this is a very difficult question to answer. If you have decided to go into dairying exclusively, breed and select for this purpose. If you have already a herd of cows, no doubt there are good milkers in it. By using with these best milkers a good type of bull from some well-known dairy breed, and whose pedigree proves him to belong to a good milking strain, you will be certain to succeed, through careful selection, in building up a choice dairy herd. Probably a bull from the hardy Ayrshire breed will give as good results as any in this rigorous western climate, although there are several well-known dairy breeds, each of which has its superiority over the others. Remember, however, that there is as much, if not more, in selection and care as there is in breed.

Is you wish to combine dairying and beef production, this calls for a dual-purpose animal. For such a purpose you will obtain good results from either the dairy Shorthorn or a cross between the Shorthorn and the Ayrshire (or some other suitable dairy breed). Here, again, selection will count for fully as much as breed.

J. W. MITCHELL,
Dairy Superintendent, Assiniboia.

Hog Cholera!

By J. A. STEVENSON, V. S., DOM. GOV. INSPECTOR, CARMAN, MAN.
The growing importance of the swine industry in Manitoba and the territories, render it necessary that those now engaged in hog raising, and those about to commence this profitable branch of livestock breeding, should be informed of the nature of this fatal disease, and especially the measures necessary for the prevention of hog cholera spreading once it has broken out in a locality. The losses to wine owners in the United States and Canada are

very large. It is estimated that in the State of Iowa alone, the losses amounted to from \$12,000,000 to \$15,000,000 in a single year.

The outbreak in the Carman district, in Southern Manitoba, is believed to be the first outbreak in the province, and is supposed to be due to hogs imported from Western Ontario. The importance of a rigid inspection of all swine at the port of shipment, should be enforced to guard against any infected animals coming into the province. However, I am glad to say the outbreak in this district is pretty well stamped out, under the quarantine rules of the Department of Agriculture, which causes all farms where the disease has been, to be thoroughly cleansed, and all diseased animals slaughtered and burned, as well as animals that have been in contact with diseased ones.

The disease of hog cholera is extremely contagious and infectious; no other disease is more so. It can be conveyed to healthy swine in an endless number of ways, both by direct contact, and intermediary agents. When the disease appears upon a neighboring farm, precautions should be adopted to prevent the introduction of the contagion. No one should go upon the fields or into the pens where such animals are, and then go to another farm where the disease has not appeared, without first washing their boots and sprinkling their clothes with a 5% solution of carbolic acid and water, and even then it is not advisable. Remember that a particle of manure or dirt the size of a mustard seed from an infected farm, is sufficient to start an outbreak that will destroy a herd of swine. A particle that size may be carried upon the shoes of a visitor, upon the foot of a dog or any other animal, upon a wagon wheel, or in a multitude of other ways. Non-intercourse at such a time is therefore the safest rule.

Having had a large experience with this disease, while Government Inspector in Western Ontario, I have found the following symptoms, which farmers and swine breeders will do well to note, and when found in their herds, report immediately to the Department of Agriculture at Ottawa. The symptoms of disease in swine are not so characteristic as in the larger animals. In the most acute and most severe cases, the animal dies very suddenly, either before sickness has been observed or after they have been ill only a few hours. Such cases are seen most frequently when the disease first appears in a herd. In the greater number of cases the progress of the malady is slower, and there is consequently a much better opportunity to observe the symptoms. There is first seen the signs of fever, shivering, unwillingness to move, more or less loss of appetite, elevation of temperature, which may reach 106° or 107° Fahr. The animals appear stupid and dull, and have a tendency to hide in the litter or bedding, and remain covered by it. The bowels may be normal or constipated, at the beginning of the attack, but later on there is generally a liquid and fetid diarrhoea, abundant and exhausting. The eyes are first conjunctivated and watery, but later on the secretions become thickened, and accumulate in the angles, and have a tendency to gum the lids together. The breathing is more or less rapid, and may be oppressed and labored in the later stages. There is a cough, which, however, is not very frequent, and generally heard when the animals are driven from their bed. It may be a single cough or it may be paroxysmal. The skin is often congested and red over the abdomen, inner surface of the limbs, under surface of the neck, and on the ears. The color varies from a pinkish red to a dark red or purple. An eruption is sometimes seen, which leaves crusts or scabs of various sizes over the skin. There is a rapid loss of flesh, and the animal grows weak and stands with arched back and drawn up abdomen, and walks with a tottering, uncertain gait; there is less and less inclination to move. The weakness and exhaustion increases until death results. The course of the disease varies from one to two days, to two or three weeks.

The most characteristic features of hog cholera seen in post mortem examinations are: (1) Hemorrhages, particularly in the subcutaneous, submucous and subserous connective tissue, in the lymphatic glands, and in the various organs of the body. (2) Ulceration of the large intestines, especially the caecum, and gloecae valve. (3) Collapse of lung tissue and less frequently broncho pneumonia.

The first question that occurs to the owner of swine when disease appears among his animals is: "What is the disease with which they are affected?" It is important to briefly consider in this place the nature of the evidence upon which this question is answered. If several animals are affected with the symptoms already enumerated, and if the same disease has been affecting the hogs on neighboring farms, we may decide that the disease in question is present, and the owner should immediately report to the Department of Agriculture, which will immediately take steps to have an investigation held, and the proper precautions taken to stamp out the disease and keep it from spreading.

E. A. VOUGHT, *Smith's, Oct. 23, 1896.* Please find my address in the issue of Oct. 23, and do not do with it.

E. J. VOUGHT, *Smith's, Oct. 23, 1896.* We like a good deal of the information that you should take in. The more you know, the more information you can give.

Russell Fair.

The fall fair held in Russell, early in October, is reported by Jas. Mitchel, of Castleberry, to have been much the most successful yet held, in respect to entries of both horses and cattle. The attendance was also good. With the large exhibit from the newly established herd of Bennie Bros., there was a display of good cattle fit to be seen anywhere. The P. B. C. B. A. diploma for best bull, any age, beef breeds, was awarded to Bennie Bros., on Knight of Lancaster 2nd, bred by W. C. Edwards, of Rockland, Ont. Diploma for best dairy bull went to Mr. Farthing's Jersey.

Springfield Fair.

One of the most important factors to a successful fall fair is fine weather, and in this respect the directors of the Springfield Agricultural Society were very highly favored, for on the days of their exhibition this year, October 3rd and 4th, the weather was everything that could have been desired. Consequently, the efforts of the directors, and their efficient secretary, Mr. B. Harvey, to make the show the most successful in the history of the society, were not in vain. The attendance was particularly good. The number of entries was large, and the exhibits in many classes were of an excellent quality. The specialty of this exhibition is the display of roots and vegetables, and certainly one would have considerable difficulty in finding a better display in this class. It is safe to say that no district in the Province is capable of producing vegetables of better quality than those grown in and around Springfield.

It was expected that a splendid showing would have been made in the grain sections, but some disappointment was experienced in this respect. The quality of the several exhibits was not quite up to the standard of former years. Some very good samples were shown, but, on the whole, the berry was small. The number of entries was smaller than that of former years, which can be accounted for by the fact that comparatively little threshing had been done as yet. The dairy department was by no means forgotten, for there were a great many entries, and the exhibits were of a high order. Keen competition throughout these sections, and successful exhibitors may justly be congratulated, as it required a good article to win a prize in any of the classes.

An improvement in the stock exhibits was noticed.

The horses shown were in many cases animals of considerable merit.

The cattle, sheep, and swine classes each had exhibits, and a number of our prominent breeders were represented.

In Shorthorns, Ed. Hudson, Ed. Anderson, Robt. Fisher, and A. Baxter were the principal exhibitors. Wm. Murray, Dugald, showed Jerseys, without competition. W. S. Corbett made entries of cows in the Holstein class. Ed. Hudson won most of the first prizes with his Shorthorn grades.

A. Baxter, Suthwyn, showed Shropshire sheep, and T. H. Smith, M. P. P., and Wm. Murray showed in fat sheep classes.

Kenneth McLeod and Wm. Jolly were the principal competitors in swine.

There were a number of very good birds in the poultry classes. Mr. S. Ling, of Winnipeg, dispensed ribbons.

Last, but by no means least, mention must be made of the beautiful display of ladies' goods. Judging from the quality of the goods shown by the fair sex, the wives and daughters of the farmers in the Springfield district must be an industrious, and, at the same time, a clever people.

Rules for Computing Interest.

The following will be found to be excellent rules for finding the interest on any principal for any number of days. When the principal contains cents, point off four places from the right of the result to express the interest in dollars and cents. When the principal contains dollars only, point off two places:

Four per cent.—Multiply the principal by the number of days to run, and divide by 90.

Five per cent.—Multiply by number of days, and divide by 72.

Six per cent.—Multiply by number of days, and divide by 60.

Seven per cent.—Multiply by number of days, and divide by 52.

Eight per cent.—Multiply by number of days, and divide by 45.

Nine per cent.—Multiply by number of days, and divide by 40.

Ten per cent.—Multiply by number of days, and divide by 36.

Twelve per cent.—Multiply by number of days, and divide by 29.

Fifteen per cent.—Multiply by number of days, and divide by 24.

Eighteen per cent.—Multiply by number of days, and divide by 20.

Twenty per cent.—Multiply by number of days, and divide by 18.

Twenty-four per cent.—Multiply by number of days, and divide by 15.

To the Coast and the British Columbia Exhibition.

BY RICHARD GIBSON.

To the Pacific Coast and return, six thousand miles, is a long journey. Going westward the interest never flags. From Toronto to North Bay some rich farming lands are passed, evidently productive and well farmed. After leaving Allendale the vision is gradually prepared for the rocky, inhospitable, lifeless district extending hundreds of miles along the north shore of Lake Superior. Approaching Winnipeg, the rocks are left behind, and for miles spruce forests intermixed with swamp and natural meadows are found. West of Winnipeg the true wheat region commences, and for hundreds of miles will be found wheat fields and prairie, the former fairly groaning under the luxuriant crops of wheat, oats and barley, and the latter providing pasture and hay for the occupiers of the cultivated farms, much of this prairie being held by speculators awaiting purchasers. It is not necessary to name the various places of interest, such as Portage, Brandon, Virden, etc.; but what does strike a stranger is the number of elevators to be seen at each station, as many as seven at one, and generally three to four at the smallest village. An unusual crop has been harvested this year as regards quantity, and a Chicago buyer whose acquaintance I promiscuously renewed, having met him years ago, informed me that of the thousands of bushels he had bought that day *all* would grade No 1. After leaving Regina the cultivated lands are gradually passed until seen only in isolated spots; the soil is alkali and apparently a desert, for neither flocks nor herds are to be seen until approaching Calgary—the bright Pearl of the Territories. This is a fine city, and by natural surroundings must be some time a great one. Not only will it be a distributing point for the Northern Route, but to the south signs point to it being the junction for the Crow's Nest Pass. With the future we have no right to speculate, but of the present may be said that it strikes a visitor, at first sight only, however, as putting on airs. The buildings seem too good for the business to be done; they are mostly of a rich, warm-tinted sandstone, quarried in the neighborhood. Calgary is the Cheyenne of Canada, for there do the cattle kings and cowboys congregate, and there do they spend their money. Nowhere else, I venture to say, can such a wonderful display of breeches and gaiters be found. The wearers are a sort of hermaphrodite mixture of an educated Englishman and a wild cowboy—equally at home, according to humor bent, in the ballroom or barroom, and gracing each with equal eclat. The show was an initial event, and as such was quite successful. The business men took hold with a will and worked, and it is pleasing to know that the result was satisfactory to them. Of the horses, some capital Clyde stallions were shown, also a good Shire. I am unable to give the names of the prizewinners, as the exhibitors are only to be known by certain numbers. The 1st prize went to the Clyde Mr. Turner won with at the Columbian; he was carrying his years well and beat his competitors in quality. A number of range-bred mares were on view, well grown, and would be considered quite creditable for an Ontario breeder to have raised. A very good Thoroughbred stallion and a nice hackney were forward, the latter by Lord Derby II., out of a Denmark mare. The driving horses were not as good as the drafts, all lacking in action and quality.

Shorthorn bulls were very good and shown in nice condition. Shattuck won on one, I believe, purchased at J. I. Hobson's sale. The 2nd prize bull was bred by Arthur Johnston. The females were not up to show form, the hair on all being dry and harsh, indicating unthriftiness, owing no doubt to the weather, and to having been driven direct from range. Some fair Ayrshires, Jerseys, and Holsteins were shown.

Sheep were only represented by two breeds, Leicesters and Shropshires. Mr. Turner showed some good specimens of the latter; a little old-fashioned, perhaps, and lacking quality somewhat; still, they were well grown, and it is evident from his success that sheep will do well in the vicinity of Calgary. Long will Calgary remain in my memory symbolical of the hearty cheer and courtesy extended to a stranger by a generous "bonhomie people proud of their city," their life's work, and its surroundings. A comical thing I can't refrain from mentioning, showing, as some would say, the progress of civilization (which I doubt). And that was an Indian in paint and feathers, riding a wheel and leading his cayuse. Sixty miles distant the Rockies loom up, and their snow-capped peaks liven up the landscape. They look to be only a few miles away, but steam annihilates distance, and shortly we approached "The Gap." At the entrance dead spruce stand erect as grenadiers, as though disputing the right of way and guarding the pass. When once within the confines of these stupendous rocks one's feelings are first of wonder and admiration, then prevails a sense of insignificance. The often sublime and always wonderful scenery never palls the appetite of the eye, ever changing from canyon to rugged and bare mountains or snow-clad peaks, the deep green of a glacier shining like burnished steel, often a thin silklike stream trickling down the dark side of the rocks for 5,000 feet,

brightening up the landscape as a flash of lightning a dark thunder cloud, or again dividing up into streams, forming a network, or what one might fancifully liken unto a bridal veil and that the virgin forest was decking herself for the marriage ceremony. Again the rocks rise in majestic grandeur almost perpendicularly on each side of the railway track. So strong do they appear that it is easy to imagine that they are the rocky foundation upon which the earth's superstructure was built. Below, the clear green waters of Kicking Horse River rush over boulder and chasm until churned into a foaming, seething mass. Limestone, shale, trap and boulder alternate with each other. Primal rock and granite cheek by jowl with shale and limestone, lying in strata perpendicular to the surface. What a field for the Geologist! An interesting object I must not omit, and that is the Great Divide. Here may be seen a stream trickling down the mountain side; part way a stone interferes with the even current of its way, and so divides, forming two tiny streams, diverging on their separate ways. One gradually flows into the Pacific at Portland, Oregon, the other finds a welcome in the Atlantic via Hudson's Bay.

After traversing through and over the Rockies and Selkirks for some 500 miles, some conception may be formed of the magnitude of the work in building the road, the indomitable perseverance and the engineering skill required. The far-seeing statesmanship of Sir John Macdonald, without whose countenance and support it would never have been built, it stands to-day the greatest national monument to his memory, as well as to the glory and advancement of the empire he sought so much to further.

Vancouver requires no note; it is making a name very fast, and, at same time, solid. It is to be, unless all signs fail, the big city of the Pacific. At New Westminster one is amazed at the vitality of these western towns. Less than twelve months ago news flashed along the wires: "N. W. wiped out." The best part of the city being almost fire-wiped and totally destroyed, to-day has risen from the ashes a well-built, substantial city. It is the center of the salmon-canning industry, and there are large lumber industries in the vicinity. The people thereof are a busy, happy community. All seem pleased with their lot, and have an abiding faith in their country; not one growl did I hear. As to the Provincial Exhibition, my report must be condensed. I took no notes, for the reason that only numbers were allowed, and without the names the report would have been like a sum in algebra. Jerseys made the great show, 105 entries; the aged bulls were as good a lot, on the whole, as I ever saw together in Canada. In awarding the prizes, the judge followed his idea as to what a dairy bull should be; coarse shoulders, wide, deep briskets, beefy chins and crops were passed. Some good bulls were fed as for the block; others skins were without color. An excellent lot of cows were shown, Mrs. A. J. Street winning with a very sweet cow, with Mr. J. S. Smith showing two excellent specimens. A particularly good yearling was shown. Ayrshires were good; in fact, all the dairy breeds were very creditable, and would win prizes in Ontario. The Holstein cows were especially good; Messrs. H. F. Page and R. McLeod showed females that are a credit to the Province. Shorthorns were the chief attraction in beef breeds. The bulls were not as good as the females, and more attention must be given to the lords of the harem; they more than represent half the herd. John Sampson showed a yearling that is quite promising. W. H. Ladner showed a quartette of cows that any breeder might be proud to own. His best cow showed signs of age, so had to be content with V. H. C. She is, however, a model to be kept in the eye of the young breeders. Herefords, represented by one exhibitor, the Kirkland Estate, were very good, and would have made a hot fight at Toronto this year.

Sheep made quite a display. Southdowns were well represented. J. T. Wilkinson, a son of our late old Hamilton friend, was the successful competitor. He is not only a good farmer and stock-breeder, but one of the hustling newspaper men. Long may he live. Shropshires were in force, and a nice lot of different types. However, I would suggest to any Ontario breeder contemplating sending sheep to the Pacific Province, to select none but close-fleeced ones. The rainfall is so great that only the tight-coated ones can stand up cheerfully under such rains as here do descend.

Messrs. Shannon Bros., Cloverdale, showed Oxfords. They are keen stockmen, and whatever they decide upon breeding, they will take—not the back seat. I have to thank them for much assistance in getting the classes into the judging ring.

The classes of swine, in most cases, were fairly well filled. Berkshires were well shown by Shannon Bros., who captured most of the prizes. Duroc-Jerseys were shown by E. A. Kipp and J. S. Smith, both of Chilliwack, the former winning the majority of first prizes. Chester Whites were well represented, the exhibitors being Messrs. Jas. Thompson,

W. R. Austin, and Jas. McCoel. Tamworths were shown by J. W. McGillivray and G. W. Beebe; Essex, by John T. Maynard; Suffolks, by A. M. Sturdy; and Yorkshires, by H. F. Page and J. S. Smith.

Heavy horses were a good lot. The stallion winning most prizes was a Shire, second at Calgary. There was keen competition amongst the Standard-breds, and some very promising youngsters were forward. I must not forget a Coach stallion owned by J. W. McLaughlin. He is an exceptionally good one, with capital action and lots of quality. Suffolks were well represented.

The fruit and vegetables were, of course, one of the great attractions, and the competitions between sections quite severe. Grain not quite up to the Ontario standard.

Taking the show as a whole, it was most creditable; better than I anticipated. The management is thorough, and directors work well. The secretary, "He's all right." Sorry time did not permit to secure material for a more interesting report.

Our Scottish Letter.

THE SHORTHORN SALES AND THE GLASGOW CLYDESDALE SHOW.

The past has been an eventful fortnight in the annals of Scottish agriculture. We have had a series of brilliant sales of Shorthorn cattle in the North, at which prices have been made which, although far short of the sensational figures paid in the days of the Bates ascendancy, have never been known in Scotland amongst breeders of Cruickshank cattle, and are of a character which promises greater permanency than was ever dreamt of by the most sanguine breeder of Bates cattle. We have had an entirely new departure in the matter of horse shows at Glasgow, and good sales of Clydesdales North and South; and, finally, at Fairfield, near to Stirling, there was the largest sale of Ayrshire cattle which has taken place from one herd in Scotland for many a day. All of these events have passed off with satisfaction to their promoters; and, when taken in conjunction with the improved prices which dairy farmers are getting for cheese and milk, they show that there is still some life in

ever, due to the extraordinary prices made by the bull calves from both herds. For twenty of them Mr. Duthie got the extraordinary average of £123 18s. each; and Mr. Marr got the scarcely less remarkable average of £116 18s. 10d. for 16. The highest price of the day, 305 gs., or £320 5s., was paid by Mr. Patten, the representative of the Duke of Northumberland, who owns an extensive Booth herd at Almirek Castle, for Pride of Princes, a grand youngster got by the great champion bull, Pride of Morning. The other two, one by the same sire, and another by Lord of Fame, made £315 apiece. Mr. Cargill, from Ontario, gave 290 gs., or £304 10s., for Golden Drop Victor, by Nonpareil Victor; and the next highest price was 270 gs., or £283 10s., paid by the noted English breeder, Mr. Deane Willis, for another son of Lord of Fame. A heifer calf by this sire made 100 gs., or £105, her buyer being an Englishman. Mr. Marr had also very notable individual prices. Mr. P. L. Mills, Ruddington, Notts., gave 270 gs. for Royal Fame, a son of Lord of Fame, and 220 gs., or £231, for King Victor, by the young bull, Golden Victor. £189 was paid by Mr. Alex. Henderson, M. P., the famous breeder of Shire horses, for Wanderer's Prince, by the noted old bull, Wanderer; and two were sold at £168 apiece. A white bull by Wanderer made £147 to Mr. W. T. Malcolm, who holds the famous Dunmore home farm; and another son of the same bull made 100 gs. to Mr. C. M. Cameron. Mr. Duthie's average for 38 animals of all ages was £89 17s. 2d., and Mr. Marr's, for 30 head, £79 5s. 6d. The averages made by the produce of certain sires of bull calves are worth recording. Two bull calves by Pride of Morning made £317 12s. 6d.; five by Lord of Fame, a capital breeding bull, unfortunately exported, made £204 10s. 9d.; six by Wanderer made £101 6s. 6d.; and eight by Spicy Robin, a young bull for which Mr. Marr paid a very long price to Mr. Deane Willis, made £78 12s. 4d. As this joint sale at Uppermill was the first of the series, it gave a tone to the whole, and the high prices continued during the week.

The second day's sale was at Newton, Insch, where a fine lot of cattle were offered, and the third best average of the week was recorded, viz., £66 19s. 6d., for fourteen head from the celebrated herd of Mr. A. M. Gordon, which furnished the champion bull of the year, Corner Stone, at the H. & A. S. show. A bull calf by him named Magic Stone went at 200 gs. to Mr. Mills, and another by the celebrated old bull, Star of Morning (now dead), made 180 gs. to the same buyer. A yearling heifer by Corner Stone also made 115 gs., or £120 15s., to Mr. Mills, so that this young sire has made a splendid start as a sire.

Mr. Wilson's forty-two head were sold at the same time, but made the lowest average of the week, £28 13s. 9d. They are good, healthy cattle, and have a good reputation. A fine, steady sale was held on the third day at Stonytown, when fifty-two head made the capital average of £43 3s. 10d., all the more remarkable that only one animal, the famous prize cow Hawthorne, made the three figures. She went at £107 2s., to Mr. Jolliffe, from Stratford-on-Avon. Mr. McWilliam is a good judge of Shorthorn cattle, and his young stock sold well. He got an average of

£30 3s. for seven heifer calves, and £43 9s. 5d. for ten bull calves. These were mostly got by the bull, Pride of Fame, a close relation of the Lord of Fame, which bred so well at Collynie.

The fourth day's sale in Ross-shire, when the selections from the herds of Mr. Cameron and Mr. Fletcher were sold, was a capital affair. Mr. Fletcher got an average of £50 6s. 10d., and Mr. Cameron an average of £47 15s. 9d. each for thirty-seven animals. It was Mr. Cameron who bred the celebrated bull, Merry Merlin, whose sale in Buenos Ayres at £850 has recently been announced; and his sire, "Merlin," was the making of Mr. Cameron's herd. Another notable animal bred in this herd was Lady XVII., a two-year-old heifer, which won at the Highland, and stood reserve to the Queen's heifer, Cicely, for the championship of the show. She was sold to Mr. Smiley, from Larne, Co. Antrim, for 130 gs., or £136 10s., and a relative of hers, Lady XXI., went at 145 gs., or £152 5s., to Mr. Henry Dudding, the famous breeder of Lincoln sheep. Mr. W. S. Marr bought a Butterfly cow at 100 gs., and the first of the bull calves went to Mr. Gordon, of Newton, at £115 10s. Considering these high prices, it is a little surprising that Balnakyle average did not exceed that of Rosehaugh, but the latter stock had a more level sale, although only two of them went into the three figures. The highest price was £115 10s., by Mr. Mills, for the cow, Coraline; and Lord Middleton gave £110 5s. for a heifer calf. The young stock from Rosehaugh had a more level sale than those from Balnakyle. Eight heifer calves from the latter made £39 4s. 10d., and ten from the former made £44 6s. 2d. Eight bull calves from Balnakyle made £39 18s., and the same number from Rosehaugh made £49 4s. 4d.

As showing how thoroughly the tide of empire is in the hands of the Cruickshank breeders, look at the averages made by Lord Polwarth's Booth cattle. For twenty-seven Shorthorns he had an average of £32 9s. 10d. His seventeen two-year-old



YEARLING HEIFERS, PINEAPPLE 12th (IMP.) AND ESTELLE 37a (IMP.), AND YEARLING BULL, ROYAL STANDARD, BY JUDGE.

OWNED BY R. & S. NICHOLSON, SYLVAN, ONT. See "Gossip," page 582.

British, especially in Scottish, agriculture. To take the Shorthorn sales first:

These have been conducted by Mr. I. M. Fraser, of Macdonald, Fraser & Co. (Ltd.), and have been attended by buyers from Ohio and Canada, the Continent, and all parts of England and Ireland; as well as, of course, from every part of Scotland. The expositors of the cattle which have sold so well have been: Mr. William Duthie, Collynie, Tarves; Mr. W. S. Marr, Uppermill, Tarves; Mr. John Wilson, Pirriesmill, Huntley; Mr. A. M. Gordon, of Newton, Insch; Mr. James McWilliam, Stonytown, Keith; Mr. C. M. Cameron, Balnakyle, Munloch; and Mr. J. Douglas Fletcher, of Rosehaugh, Avoch. The two last named are in the Black Isle district of Ross-shire; the third last is in Morayshire; and the others are in Aberdeenshire. All the cattle sold were more or less strongly-bred Cruickshank; but at Rosehaugh Mr. Fletcher has been experimenting with considerable success in amalgamating Bates and Cruickshank blood. At the Underley dispersion he purchased several of the best of the Duchess cows, and these he has crossed successfully with northern bulls. At Smithfield and other shows fat stock from this cross has more than once been exhibited with success, and Mr. Mills spoke very favorably of the animals in the herd and sale similarly bred. He expressed the opinion that it took three to make a perfect Shorthorn: from Booth you get the quarters, from Cruickshank the ribs and middle piece, and from Bates the head. There is truth in this view; and more of Bates will not hurt the Sittyton strain if it be wisely introduced. At Mertoun, in the previous week, Lord Polwarth sold a number of young healthy Booth cattle, but the comparison of prices is altogether in favor of the northern contingent.

The most sensational of the sales was that at Uppermill, where the joint offering of 68 head from Mr. Duthie's and Mr. Marr's herds was made. The average of the 68 cattle was £85 3s. 9d., chiefly, how-

yearling heifers made an average of £28 17s. 6d., and his ten bulls made £38 12s. 10d. The females were good sorts, one in particular being of prize-winning character. His Lordship at the same time dispersed his Galloway herd. Thirty-five head of these made £14 14s. each. This is only a little better than the average made at the Fairfield Ayrshire dispersion, when 132 head of all ages made an average of £13 8s. 8d. Sixty-eight cows, good, big, fancy animals, healthy, and the kind which fill the pail, made £15 8d., a first-rate price, and fourteen three-year-old queys sold well at an average of £14 8s. 4d. Fifteen two-year-old queys made £12 13s. 9d., and twenty yearling heifers, £9 15s. 10d. All this is excellent, and speaks volumes for the buoyancy of the cattle trade.

THE HORSE TRADE

is equally lively. At the autumn sales of colts and fillies an advance of from £4 to £5 per head is reported, and the export trade has not for long been so brisk. At Lord Londonderry's annual foal sale at Seaham Harbour there was good trade. Twenty fine foals made the splendid average of £41 14s. 1d., and ten got by the stud horse, Lord Stewart, drew £52 14s. 2d. each. At Lord Polwarth's sale, eighteen Clydesdales, of varying ages, were sold, and drew an average of £45 8d., the highest price being 97 gs., or £101 17s., paid by Mr. Kennedy for the good young mare, Border Jasmine, which was first at Glasgow when a yearling, and has since been a noted prizewinner.

The great horse event of these later days, however, has been the Scottish Stallion Show. For many years the great Scottish show of Clydesdale stallions has been held in the Glasgow cattle market in February. To it there used to gather the representatives of district societies from all quarters, and selections were made of horses to travel in their districts. About the year 1882, and increasingly since, this system has been falling into desuetude, and most societies had got into the way of engaging their horses privately during the winter. Thus it came about that the Glasgow show was shorn of much of its interest, and the last two shows did not pay the Glasgow Agricultural Society, under whose auspices these shows have been conducted. The Society has recently acquired a permanent stand on which to hold its shows, at Scotstoun, on the north side of the Clyde, about three miles west of the center of the city. It was resolved to inaugurate this new venture by holding the show there during the past week, and to join with the Stallion Show a cart-horse parade and driving competitions. These events came off in due course, and for a first attempt were entirely successful. About thirty horses were hired, instead of seven or eight as in previous years, and the selections were made of horses to travel the Glasgow district during 1900. The winners were Mr. James Kirkpatrick's Royal Carrick 10270, and Mr. Marshall's Mercutio, the latter a son of the dual Cawdor Cup champion, Hiawatha. In open competition for graded prizes, several splendid horses were shown, although they were scarcely in the same bloom as they would have been in spring. In the aged class, Royal Carrick was again first, Mr. W. S. Park's Prince of Brunstane 9977 was third, Mr. A. Mackobbie's Canynman 10323 fourth, Mr. Marshall's Moncreiffe Marquis 9953 fifth, Mr. Kilpatrick's Cawdor Cup 10045 sixth, and Mr. Alex. Scott's Holy Friar 10569 seventh.

In the three-year-old class, first prize went to what was perhaps the best horse in the show, Mr. Herbert Webster's Baron Kitchener 10490, a son of the famous Baron's Pride, Mr. James Kilpatrick being second with Royal Garty's Heir 10361, and Mr. Marshall third with Mercutio; Mr. Alex. Scott was fourth with Prince of Cowal, and Mr. Richard Dunn fifth with Rozelle 10638. In the younger class, rising two, the most notable thing was the defeat of the H. & A. S. first prize winner, Blacon Baron, by Mr. Wm. Dunlop's Sylvander, which was placed fourth at the Highland. On Saturday the parade of street cart horses was a great success, and it indicates the value of Clydesdale geldings to say that three of the best horses owned by Mr. James Forrest, of the City Saw Mills, were sold for 370 gs., or £388 10s., an average of £129 10s. each.

“SCOTLAND YET.”

Sheep and Dogs.

SIR.—In the October number of the *Advocate* appears a letter from the *Orillia Packet*, dealing with the “Sheep Industry and the Dog Nuisance.”

From my little experience, I believe the sheep industry to be most profitable if it were not for the “dog nuisance.” It does seem to me that a more stringent law in regard to dogs should be passed. By section 510, chapter 223, of the Revised Statutes of Ontario, municipal councils may pass by-laws for restraining and regulating the running at large of dogs, and for impounding and killing dogs running at large contrary to the by-law. If township councils pass a by-law that the owner of every dog shall be liable to a fine for harboring a dog, and shall be liable to a nominal cost over and above the fine, if the dog were lawful for any purpose, the law would be abated. Then, if the dog were a nuisance, the owner would be liable to a fine, and the dog would be a danger to sheep, and the owner would have no need of a dog.

have none too much bread for their families, let alone for one or more dogs; so the said dogs are compelled to forage for themselves, and the temptation to a feed of mutton is very great. Our township councilmen in some cases are too anxious to secure the votes of the owners of these hungry dogs, to do their duty in this matter; but if the farmers would unite, and urge the point, by-laws like the above might be passed. I hope that you will continue to agitate this question until the innocent sheep shall have equal rights.

Wentworth Co. A. B. C.

Some Intricate Pig Questions Discussed.

DRY AND WARM WOODEN BUILDINGS PREFERRED IN WINTER—RATIONS AT VARIOUS STAGES OF GROWTH AND FATTENING.

Perhaps the man who can write most confidently regarding the proper methods of managing swine is the man who has had the least experience. As experience widens, fresh problems keep arising, and there are so many unsolved problems hovering around us the present time that one feels considerable diffidence in attempting to commit his ideas to paper. It is one thing to say that such and such methods give rapid gains, and quite another thing to say that the same methods will give a first-class quality of bacon. The cry that has gone up regarding “soft bacon,” and the conflict of opinions regarding its cause, have had their effect in making thoughtful people cautious regarding their statements. If every feeder could follow his hogs through the packing-house, he would probably find that some of his pet theories received a rather rude shaking up. Some members of packing-houses have given farmers very explicit instructions as to how they should feed their hogs; but during the past summer a very successful breeder and feeder of swine sent to the packing-house a batch of hogs which had been fed according to methods approved by the firm to which he sent them, and was astonished when he received word that his hogs had been improperly fed, some of them being decidedly soft and few of them absolutely firm. This incident is related merely to show that while the packer has no doubt mastered all the intricacies of his end of the business, there are evidently a few things which he does not know regarding the apparently simple operation of feeding a pig. It is true that investigations are in progress, but investigating is necessarily slow work, and so there is still a large field to be explored. This long introduction is intended to explain why it is not possible to deal with the question of wintering pigs as fully as is desirable.

The winter housing of hogs is not an easy problem to deal with. The main difficulty is encountered in getting enough exercise for the animals. When a man has comparatively few hogs, he can master this part of the difficulty fairly well; but when the numbers are large and comprise all ages, sexes, and breeds, the real magnitude of the question is appreciated. Our buildings are not well adapted to provide exercise, and in the winter we are compelled to confine animals more closely than we would desire. We have been able to obtain very satisfactory growth, but have not yet convinced ourselves that we are producing bacon of the best quality. A piggery, above all things, should be dry and warm. We have had best satisfaction from wooden buildings, and prefer wood to anything else for the walls of the building. We have some cement floors, with planked sleeping places, which are giving very fair satisfaction; but our farrowing pens are floored with plank.

For pigs just after weaning we find nothing better than wheat middlings and skim milk. Sometimes we cannot get all the skim milk we want, and have to divide the limited supply among those most needing it. We have used ground oil cake and ground flax seed in very small quantities, steeped with the middlings; but though they are better than nothing, they do not equal milk. Of the two, probably the ground flax seed is the better, but it should not constitute more than about five per cent. of the total food. By the time the pigs are about three months old a little ground grain is usually added. We like barley for this purpose, and often add a few oats ground as finely as possible. Soon after this, a few roots are added to the ration. We have fed roots cooked and raw, and have very little preference, except that sometimes cooked roots are eaten a little more readily. We prefer sugar beets, but turnips and mangels are also good. When potatoes are fed, they are always cooked. When fed raw, the roots are pulped and mixed with the meal ration, after which the whole mass is moistened. As to quantity of roots, we have fed to growing pigs as high as fifty per cent. of the total ration; that is to say, equal quantities by weight of roots and meal mixture. This, however, is an excessive quantity, and probably the roots should not exceed twenty-five per cent. of the total weight of the ration (25 lbs. roots to 75 lbs. meal mixture). In these matters, however, the feeder must be guided by the condition and the whims of appetite of the pigs.

We have fed clover hay in limited quantities, principally to breeding sows. They are given an occasional feed of cut clover hay mixed with a little meal and steamed. It gives variety to the ration, but roots are our main dependence for bulky food. Hogs intended for fattening usually have their supply of roots reduced when they reach about one hundred pounds live weight. Sometimes the roots are cut off altogether, but this depends upon how rapidly it is desired to force them. If the hogs are

somewhat thin, and it is desired to increase the proportion of fat, as well as secure growth, few, if any, roots are fed. For fattening, we prefer a mixture of grain. Equal parts by weight of peas, barley, and wheat middlings or shorts have given very good satisfaction. Sometimes a few oats are included. We feed three times a day, and in deciding upon quantity we are guided entirely by the condition of the hogs. They usually have their feed cleaned up in less than half an hour after feeding. Food is almost invariably given in a well-moistened condition. We have not found any decided advantage from soaking food over mixing it as required.

We aim to give the hogs as much space as possible, but up to the present the amount of exercise has not been what we would like. If we discover some method of overcoming this difficulty, we shall be pleased to report.

G. E. DAY, Agriculturist.

Ontario Agricultural College, Guelph.

Sheep for Breeding.

At the request of Secretary Coburn, of the Kansas Board of Agriculture, John A. Craig, Professor of Animal Husbandry of the Iowa Agricultural College, delivered an address before the Board's recent annual meeting on “Sheep—Good and Bad.” Among other interesting things contained therein he outlines the points that should be found in animals which are to be used especially for breeding purposes, and also the condition they should be in. As Prof. Craig is a recognized authority on all matters pertaining to sheep, the following may be profitably read and considered by all identified with this industry:

The ram should show masculinity in many features. In those breeds that have horns, the latter should spring strong from the head and turn clear from the face. In all rams the face should be broad between the eyes, somewhat short, and with a Roman nose. The crest, or scrag, should be thick and rising, and the neck full. A point deserving emphasis is the depth of the chest. The body should sink deep between the fore legs, and the ribs back of the shoulder should be deep and round, making the girth large and the brisket prominent and wide—two features that are indicative of a strong constitution. A live fleece—that is, one that is springy and not dead to the touch, and especially a dense, thick covering of belly wool—is also indicative of vigor or constitution. For the same reason, in those breeds that are woolled about the head, the more complete and dense this covering is the better it is liked. The legs of the ram should be straight and strong, and short. In movement the ram should be bold and active. This is often influenced by the condition. A ram should never be so heavy in flesh as to be useless in service, as is too often the case in the showing. The flesh should be even and firm, and not gathered in masses or rolls at any part of the body. It is very apt to gather at the foreflank, leaving the back bare or raw. Excessive condition is likely to make the ram unwieldy in action, or result in broken-down pasterns, which usually render a ram useless for breeding purposes.

The ewe should be rather long in the face, with fine features. The neck should be slender and without any of the thickness noticeable in the ram. The body should be deep, round-ribbed, and specially long, so as to provide room for the growing lamb. The type of the good-milking ewe verges strongly toward that which is typical of the good dairy cow. The ewe that milks well, and consequently rears early-maturing lambs, tends toward the wedge shape, deep in the chest, large bodied, and wide across the loins and hips. The condition of the ewe should not be such as to impair her breeding qualities. Excessive fatness, as a rule, is in this way injurious. The flesh should be evenly distributed and not gathered in bunches about the tail-head, and it should be firm and not too flabby.

As a result of our consideration of the good and bad qualities of sheep, there arises the more important problem of breeding to reproduce the former and to remove the latter. I have failed to find, up to this day, where success has been obtained by in-and-in-breeding, cross-breeding, or any other form, but that there was a man behind the system who knew well the merits and demerits of the animals he was breeding. And further, knowing these, he made his selection to get the best blend. This is the basis of a method of breeding that arises from what has gone before. For want of a better term I have named it “balanced breeding,” and I believe that this method has the means of developing and adding to the good qualities, and at the same time lessening and removing the demerits of our domestic animals.

To follow balanced breeding in sheep would mean the selection of rams with the leading thought of removing the weakness of the flock. When one realizes the force of balanced breeding, and acts on it in the selection of sires, it is wonderful what strides may be made toward perfection in a few years. With this sire we correct a deficiency of the fleece, and yet retain the good qualities of form; with another we add a little more bone; another deepens the flesh on the valuable parts; and so on, such marking a new advance; while closer discrimination and riper judgment keep disclosing new features to be attained in each additional effort.

Directors of the Brandon Fair for 1900.

The Western Agriculture and Arts Association of Brandon held its annual meeting in September, when the following officers were elected for the ensuing year: President, W. J. Lindsay; 1st Vice-President, R. M. Matheson; 3rd Vice-President, R. E. A. Leech; Directors, W. Ferguson, J. W. Fleming, J. Hanbury, T. E. Kelly, Wm. Middleton, A. McPhail, P. Payne, H. L. Patmore, F. J. Clark, Wm. Anderson, W. J. Lindsay, R. E. A. Leech, R. M. Matheson, and — Pilling.

Horse Stall Floor on Cement Bottom.

Mr. W. V. Hopkins, Halton Co., Ont., sends us the following plan of horse stall floor which he finds works complete, and as so many have little bedding to use, it will keep the horse clean, dry, and off the cement.

Mr. Hopkins writes that his sketch was not drawn to any rule, as the number of pieces, 2½ x 5, are too few, and are not split; but he would have 5 pieces in each part bolted together. The part to the right in cut is solid nailed to oak strip laid in cement. In the rear part a half-inch washer, a blank iron nut, separates the 2½ x 5 oak pieces, giving drainage. Each half is bolted with ½ inch iron rods. It is easily lifted out for cleaning when desired, as it lies on cement, and is held by corner against the post. A bent iron cleans out cracks by just pulling it along them.



Buttermaking-- My Method.

BY GEO. RICE.

Whilst I think there is no necessity for everyone to rush into private creameries, when large public creameries are within reach, because buttermaking is a thing that can't be turned off on any Tom or Dick, but should be attended to by one competent person to ensure uniformity, and also that it is about as much trouble to make 10 lbs. of butter as 100 lbs., and it can be made in factories at considerable saving of labor, still there are such conditions, as in our own case and others, where the skim milk is a necessity, where many calves are raised, and in such there may be advantages to offset the disadvantages. I simply desire for each to look ahead and count the cost, because I hold that if butter is to be well made, we should provide proper utensils.

The first requirements will be a separator. The cost of a good one is considerable. But I warn beginners against purchasing too small a machine. Anything under a capacity of 500 lbs. per hour is but a toy, and you will soon be tired of it.

The advantages of a separator are: 1st, a saving of 15 to 25% of butter lost in skim milk; 2nd, a richer cream, thus obtaining a more thorough churning, and saving 10 to 20% lost in buttermilk; 3rd, a uniformly rich cream, ensuring a uniform quality of butter—better butter—as separator aerates and cleanses the milk. When cream is held to mix with other cream before churning, I immediately cool the first cream and hold it as sweet as possible. Then when enough cream is on hand to churn, all is mixed and ripened together, starting at a temperature of 70 or 80 degrees, and, as it ripens, cool to churning temperature. Churning temperature will depend largely upon richness of cream. With cream containing but little skim milk, we can churn at a lower temperature, which means more thorough work and better grain. Cream should be rich and ripe enough to churn at 60 degrees, and better 55 degrees. Butter-making is largely a question of temperature, and one can not make a uniformly good article every time without a thermometer, as one degree even makes considerable difference, and one can not come that close by sticking a finger in the cream to take the temperature. Let me emphasize this: More butter is spoiled from lack of a thermometer than from any one cause. Too much color should not be used; better under-color than over-color. Over-colored butter is offensive to one of fine taste.

I churn until butter breaks, then add some water. If temperature of room is above 60, add water below 50; if not warmer than 60, add water 2 or 3 degrees lower than cream is churned at. Churn again until no small specks like clover seed appear on lid, but keep butter in granular state like wheat. Draw off buttermilk and add 10 quarts of water at least to 10 lbs. of butter. Considerable water helps to keep the butter from massing. Water added should be just cold enough to keep the butter firm. Washing butter with water very cold will make mottled butter, especially if the butter is put up soon after the salt is added. Re-working will remove mottles, but too much working injures the grain. So that you see we want a proper temperature at every stage. But there is no cast-iron rule; the temperature for one dairy may not quite suit another. But the temperature used successfully one day should give equal results every day, if the cream is of same richness and ripeness.

I prefer to salt in the churn, and allowing one-half hour before putting up in pound prints. The very best butter salt is used, ¾ to 1 oz. to the pound of butter. I always try and suit taste of customers. There is no trouble marketing A1 butter. If you

can't make private contracts, a commission man is the next best way of selling. No peddling or trading for me.

[NOTE.—Mr. Rice was winner of the fourth prize in the buttermaking competition at the late Toronto Industrial Exhibition.—Ed.]

My Way of Making Butter.

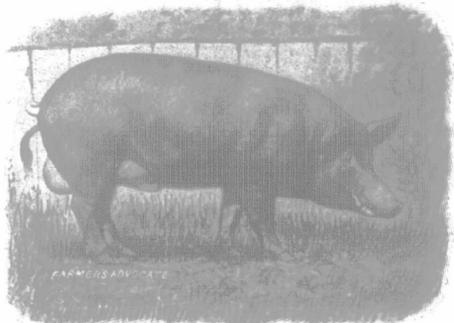
BY MISS FANNY BERRY, BRUCE CO., ONT., WINNER OF THIRD PRIZE IN PUBLIC BUTTERMILKING COMPETITION, TORONTO INDUSTRIAL EXHIBITION, 1899.

1. *Cream Raising.*—I set the milk in deep cans in water kept cold with ice. I strain the milk through a cheese or butter cloth as well as through the strainer. It keeps back all cows' hairs and fine particles of dirt, which injure the flavor. I let the cream rise twenty-four hours. Always keep the cans sweet by washing and scalding when I see it is necessary to do so.

2. *Ripening.*—I save the cream in a cool place and keep it sweet until sufficient for churning is gathered. Then I remove it to a warm place to sour or ripen, which takes from one to two days.

3. *Churning.*—I scald and cool the churn. I use the Dairy Queen, which turns with a crank and has paddles inside. The temperature of the cream in summer is from 58 to 60 and in winter from 60 to 68. With fresh milk cows I can churn easily at 62 in winter, but the butter is much firmer at 60, only it takes much longer to churn. I use butter color when needed in winter, a small teaspoonful to four gallons of cream. In the spring and fall when the grass is poor I use a half teaspoonful to four gallons of cream; that gives it a nice June tint. I take about ten minutes to draw off the buttermilk and wash the butter. I wash the butter twice, first with a small quantity of water and then with a larger quantity.

4. *Salting.*—I use either Windsor or Ransford's fine dairy salt. I pack in tubs through summer, using one ounce of salt to a pound of butter. In winter or while the cold weather lasts I make into one pound rolls wrapped in parchment butter paper, using ¾ of an ounce of salt to a pound. I use a lever butter worker. I weigh the butter when taken from the churn, then weigh the salt, sift it with the strainer dipper which I use in straining



TAMWORTH BOAR UNDER ONE YEAR.

First prize at Toronto, Quebec, and Ottawa, 1899 OWNED BY H. GEORGE & SONS, CRAMPTON, ONT.

the buttermilk. I press and turn the butter with the worker until the salt is well worked in it and the water well worked out, then pack or print it.

5. *Selling.*—I ship all my butter to Toronto. I have sent it to several parties there for the last year and now send it to Park, Blackwell & Co., from whom I always receive a good price.

Fifty Dairy Rules.

Fifty short, practical dairy rules, which should be observed in the production and handling of pure milk, have been printed by the U. S. Department of Agriculture on large cardboards for posting in stables and dairy rooms, and widely distributed to milk producers. These rules are based on matter in Farmers' Bulletin No. 63, "Care of Milk on the Farm." They are as follows:

THE OWNER AND HIS HELPERS.

1. Read current dairy articles and keep posted on new ideas.
2. Observe and enforce the utmost cleanliness about the cattle, their attendants, the stable, the dairy, and all utensils.
3. A person suffering from any disease, or who has been exposed to a contagious disease, must remain away from the cows and the milk.

THE STABLE.

4. Keep dairy cattle in a room or building by themselves. It is preferable to have no cellar below and no storage loft above.
5. Stables should be well ventilated, lighted, and drained; should have tight floors and walls and be plainly constructed.
6. Never use musty or dirty litter.
7. Allow no strongly smelling material in the stable for any length of time. Store the manure under cover outside the cow stable, and remove it to a distance as often as practicable.
8. Whitewash the stable once or twice a year. Use land plaster in the manure gutters daily.

9. Use no dry, dusty feed just previous to milking; if fodder is dusty, sprinkle it before it is fed.

10. Clean and thoroughly air the stable before milking. In hot weather sprinkle the floor.

11. Keep the stable and dairy room in good condition, and then insist that the dairy, factory, or place where the milk goes, be kept equally well.

THE COWS.

12. If any ailment appears, have the herd examined by a skilled veterinarian.

13. Promptly remove from the herd any animal suspected of being in bad health, and reject her milk. Never add an animal to the herd until certain it is free from disease, especially tuberculosis.

14. Do not move cows faster than a comfortable walk while on the way to place of milking or feeding.

15. Never allow the cows to be excited by hard driving, abuse, loud talking, or unnecessary disturbance; do not expose them to cold or storm.

16. Do not change the feed suddenly.

17. Feed liberally, and use only fresh, palatable feed stuffs; in no case should decomposed or moldy material be used.

18. Provide water in abundance, easy of access, and always pure; fresh, but not too cold.

19. Salt should always be accessible.

20. Do not allow any strong-flavored food, like garlic, cabbage, and turnips to be eaten, except immediately after milking.

21. Clean the entire body of the cow daily. If hair in the region of the udder is not easily kept clean, it should be clipped.

22. Do not use the milk within twenty days before calving nor within three to five days afterwards.

MILKING.

23. The milker should be clean in all respects; he should not use tobacco; he should wash and dry his hands just before milking.

24. The milker should wear a clean outer garment, used only when milking, and kept in a clean place at other times.

25. Brush the udder and surrounding parts just before milking, and wipe them with a clean, damp cloth or sponge.

26. Milk quietly, quickly, cleanly and thoroughly. Cows do not like unnecessary noise or delay. Commence milking at exactly the same hour every morning and evening, and milk the cows in the same order.

27. Throw away (but not on the floor, better in the gutter) the first few streams from each teat; this milk is very watery and of little value, but it may injure the rest.

28. If in any milking a part of the milk is bloody or stringy or unnatural in appearance, the whole mess should be rejected.

29. Milk with dry hands; never allow the hands to come in contact with the milk.

30. Do not allow dogs, cats, or loafers to be around at milking time.

31. If any accident occurs by which a pail full or partly full of milk becomes dirty, do not try to remedy this by straining, but reject all this milk and rinse the pail.

32. Weigh and record the milk given by each cow, and take a sample morning and night, at least once a week, for testing by the fat test.

CARE OF MILK.

33. Remove the milk of every cow at once from the stable to a clean, dry room, where the air is pure and sweet. Do not allow cans to remain in stables while they are being filled.

34. Strain the milk through a metal gauze and a flannel cloth or layer of cotton as soon as it is drawn.

35. Aerate and cool the milk as soon as strained. If any apparatus for airing and cooling at the same time is not at hand, the milk should be aired first. This must be done in pure air, and it should then be cooled to 45 degrees if the milk is for shipment, or to sixty degrees if for home use or delivery to the factory.

36. Never close a can containing warm milk which has not been aerated.

37. If cover is left off the can, a piece of cloth or mosquito netting should be used to keep out insects.

38. If milk is stored, it should be held in tanks of fresh, cold water (renewed daily), in a clean, dry, cold room. Unless it is desired to remove cream, it should be stirred with a cream stirrer often enough to prevent forming a thick cream layer.

39. Keep the night milk under shelter so rain cannot get into the cans. In warm weather hold it in a tank of fresh, cold water.

40. Never mix fresh warm milk with that which has been cooled.

41. Do not allow the milk to freeze.

42. Under no circumstances should anything be added to milk to prevent it souring. Cleanliness, aeration, and cold are the only preventives needed.

43. All milk should be in good condition when delivered. This may make it necessary to deliver twice a day during the hottest weather.

44. When cans are hauled far they should be full, and carried in a spring wagon.

45. In hot weather cover the cans, when moved in a wagon, with a clean wet blanket or canvass.

THE UTENSILS.

46. Milk utensils for farm use should be made of metal, and have all the joints smoothly soldered. Never allow them to become rusty or rough inside.

47. Do not haul waste products back to the farm in the same cans used for delivering milk. When

Does it Pay to Dry Cows?—Calves Should Come in the Fall—Continuous Housing Not Advisable.

Regarding the question as to whether a cow should be given a rest during the winter or kept on milking all the year, I would say that my experience has been that the cow that milks all the year is the one that gives the best results. If a cow will milk from calf to calf let her do so; but if she is dried at all she should be six or at least five weeks dry, as after that time nature is stimulating the milk-producing organs to increased activity, and by forcing her dry then means forcing her against nature and she will not do as well as she would if either dried earlier or continued milking to calving time.

I have a cow that has been milking continuously for over eight years, except once that I forced her dry, and that time she did not give much more milk when she came in fresh than she did when I commenced to dry her. I have also noticed in other cows the same thing, and my experience teaches me to milk a cow as long as she will give milk, and to try to get my cows to be continuous milkers; they will in this way give more milk in a year and give you just as good calves. A heifer, especially with her first calf, should be milked from calf to calf, even if she give but very little at the last, as you largely make your cow a good or a poor one by the way you handle her with her first calf.

I find I get the best results by having most of my cows come fresh in the fall or early winter; this way they give the most satisfaction when the price of butter is the highest. In this way they pay me a profit over cost of keeping when that cost is at the highest, and when let out in the spring the change to the fresh grass stimulates them to increased production again. When many cows are kept some should come in fresh at different times during the year, but most of them should freshen in the fall.

As to keeping cows in the stable continuously all winter, I do not think it advisable, as I think a little exercise on fine days now and then does them good, although those days may show a slight falling off in their milk, due, of course, to the fresh air and exercise they have had. By no means, however, let them out on cold or stormy days; do not let them out such days even to get water. It pays to have water before them in the stable all the time; they can then drink when they wish and the water will not be ice cold. Ice cold water certainly lowers milk production.

Ontario Co., Ont. F. L. GREEN.

The Fall and Winter Care of Pigs.

BY D. LAWRENCE, OXFORD COUNTY, ONT.
[FROM OUR ONTARIO AND EASTERN EDITION.]

A great deal has been said and written on the subject of how much exercise pigs require in order to most profitably grow and fatten. Some writers maintain that pigs should run at large until the last few weeks when they are finishing off. I kept one pen shut in all the time and allowed another pen to run out all day and gave both the same feed, those running out getting the benefit of anything they could pick up. And the result was that those pigs which were shut in all the time grew and fattened most rapidly. They were Tamworth-Berkshire hogs, and perhaps those which had liberty ran about too much for their good. Perhaps pure Berks., Chesters, or Duroc-Jerseys, being of a more indolent disposition, would not run so much, and might do better at large. It is only reasonable that if a pig runs about a great deal, it must take feed to keep up the wear and tear of its system. Our pens are about 9 feet x 12 feet 6 inches, and in my experience afford plenty of room for seven pigs.

For fall feeding I prefer pumpkins. I cook them in our cooking vat, and after the cooked mess has stopped boiling I put in a quantity of well-ground chop, and then with a hoe mix up much in the same way, as the bricklayers' attendant mixes mortar. Take out enough at a time for a feed, and thin off a little with whey, milk or swill or water to about the consistency of thick cream. After this has been eaten, the pigs that are finishing off get all the peas or corn they can eat up clean. Unfortunately, our pumpkins were not good this year, and we had only a few vats full. I think if I had plenty of pumpkins that I could force pigs that weighed from 125 lbs. to 140 lbs. to gain nearly 2 lbs. each per day. By actual weighing we had one pen that made an average gain of 1½ lbs. each per day for a month. There is a great science in feeding just enough and the right kind of feed in proper proportions. And it does not do for first one and then another to be feeding the pigs. One man should attend to the feeding and make a study of the wants and tastes of the gruntings, and the results will be much better than if any one on the farm runs in and throws the animals a little of whatever feed is handy by.

During winter I think pigs should have some roots, either pulped or cooked. Pulping is very good, but I think for the small pigs and for those finishing off, cooking is much better, especially if one has the proper appliances. We are now cooking small potatoes for the young pigs which are still getting at the sows over night. I think carrots and sugar beets are more suitable for pigs than mangels

and turnips. In winter I have tried cut clover hay put in the vat and cooked with roots and chop added; and when one has really good clover hay, well cured, I believe it is a profitable feed for pigs 70 lbs. and upwards. For chop, I prefer to mix peas, small wheat, barley and oats; of course, using a much larger proportion of the two latter than of the two former. When feeding chop without roots we soak in whey or water one feed ahead. But when feeding cooked pumpkins or roots, the chop is mixed with the cooked mess, as already stated. When feeding pulped roots, we find it an advantage to pulp one feed ahead and mix with the chop and a handful of salt. It then heats a little and the pigs relish it more. When cooking feed we never throw away any ashes, but when cold give a shovelful to each pen, which is eaten up greedily. For vermin I use Little's Sheep Dip, weakened down in the sprinkling can, and treat piggy to a spray bath while he is eating his dinner. The old sows with long bristles are better to have it rubbed in by hand. Our boar's tusks grew long and protruded, so that he tore our sow on the side. I got the man who dehorned our cattle to take his clippers and clip off the offending tusks very neatly and I believe almost painlessly. This is a much better way than the old method of knocking them out with a cold chisel and hammer. We give some fresh straw every day and endeavor to clean out twice a week, and oftener when possible. I think it pays to use enough straw to soak up all the liquid. The manure made in the pigen is worth something. We feed the first time before breakfast, then at noon, and again before retiring for the night. At the final fattening period I gradually reduce the roots and increase the grain ration until the last few days, when no roots are given.

The Fairs of the Future.

An anonymous correspondent who has fallen into the not uncommon error of assuming that the fairs of the present century are over and that the beginning of the next year will be that of a new century, writes:—



DORSET HORN SHEEP.

In first-prize flock, Toronto and Ottawa Exhibitions, 1899.
PROPERTY OF M. N. EMPEY, NAPANEE, ONT.

Let us review the system and general management of the Fair of to-day, and with the dawn of a new century inaugurate, if possible, something better.

We purchase our tickets, and walk into the grounds; the bell is ringing; speeding in the ring is called. Not until the horses have started fairly are they allowed to go. An interesting and anxious crowd watches their progress. The judge names the winners according to their performance and position. The time is given and the crowd is satisfied. A director farther down calls, "Single drivers, carriage." We go to the ring; we admire the high-stepping chestnut with its proud and handsome carriage, and mentally pronounce it the winner. The bright bay horse, somewhat smaller, but with free and easy gait, we pronounce second. The black jogs around slowly. Its wind is bad. They all draw up in a line. The crowd is interested. The judges examine the animals. They walk around them and secretly examine the drivers. They hold a silent meeting for five minutes, during which time the crowd, wearied with waiting, wanders away.

Then with a dozen or so around the ring the prizes are given. Black, First (her owner gave \$10 to the Association); Chestnut, Second; Bay horse, Third. Influence won; merit lost.

We leave the ring and go to the Hall exhibit. We admire the crayon work, and wonder why "The Flower Girl" got first and "The Home-stead" second. We pass down the long aisle, with here a red, and there a blue. Hundreds pass by in the same perplexity.

Now, we ask the question, Is this system of awarding prizes or premiums progressive, equitable or educating? In other words, is it in touch with the times of to-day? Is there no way of adjusting matters so that the same interest and fairness be maintained in all classes as that openly displayed in the speeding?

The answer is plain and simple: By adopting the same plan. Let the judges be supplied with stands from which they may fearlessly and faithfully proclaim the winners. In doing so let them briefly give their points of excellence. A judge not competent to carry this into effect is not qualified for his position. It would raise the standard of judges, whose decision would be closely watched and criticised by the spectators. Thus, interest would be secured, and not only so, but justice would be rendered.

A similar system could be adopted in other departments. The judges could be supplied with blanks, briefly stating the winning points. These placed alongside of the prize of the article exhibited told the people which was the best, and why.

This is not an uncommon complaint, but we hope and believe it is less common in these days than in the former times, and from a long experience and close observation we are convinced that as a rule it is a mistaken idea and has little foundation in fact. There may be, and doubtless are, exceptions, but we are persuaded that as a rule fair boards are careful in the selection of their judges and that the men who accept the thankless task act upon their best

judgment without fear or favor. Our correspondent makes no allowance for difference of opinion or difference in judgment, or for the reasonable presumption that the judges in the ring who are personally responsible for the awards and have made a close and critical examination of the exhibits are in a much better position to give a correct decision than are the people outside the ring who do not feel the weight of the responsibility which attaches to the giving of a decision in the sight of a critical public. The complaint may be more applicable to the smaller or local fairs, but we believe that in so far as the principal shows in the country are concerned it is generally conceded that commendable care is observed in the selection of competent and fair men, and that better work is done as a rule by judges than in former times; but it is more difficult than many suppose to fix upon men who are at once competent, available and disinterested. That considerable allowance should be made for difference of opinion and of judgment is obvious from the fact that at the leading shows, with judges conceded to be competent and whose honor is unimpeached, an animal which has been placed first at one show is the next week, in the same competition, relegated to third place. We are free to confess that we wish it were otherwise, and that a more general concurrence of judgment on the part of men admitted to be competent were possible, so that the educational influence of their work might be more definite, but we have to take into account the fact that even a week may make considerable difference in the appearance of an animal that is away from home and subject to the disabilities of the showyard and of railway travel, and may look less attractive on his second than on his first appearance in public. But after all, when we remember that not infrequently the learned judges of the Supreme Court differ and disagree in their judgment of the quality and value of evidence,

it is not strange that men honestly differ in their estimate of the value of points in animals or articles in competition in a showyard.

The innocence of our correspondent exhibited in his expressions of confidence in and admiration for the un-failing justice and invariable fairness of the judges in the speeding contests is refreshing and is in striking contrast with the estimate formed by a large proportion of fair visitors and of not a few of the owners and drivers, judging from the vigorous language often indulged in around the winning-post. If the remedy suggested were practicable, we doubt whether it would prove all-satisfying to exhibitors or even to onlookers, as the effort to convince a man against his will would probably leave him of the same opinion still, and the difficulty of securing efficient judges would be infinitely increased, as many a

worthy man competent to judge would shrink from the ordeal of a public address from a raised platform, and the men who talk most are not as a rule those whose judgment commands the greatest respect. Moreover, the remedy suggested is not an untried one, as it has been found that even a college professor has failed to hold an audience of farmers on a fair ground, though descending never so eloquently on the mysterious influence on the performance of a dairy cow of a Flandrine, a Curvaline or a Limousine escutcheon, of wedge-shaped conformation, abnormal navel development, the convex pelvic arch and a distinctly corrugated vertebra. The proposition to judge by performance sounds well, but it is difficult to conceive how its adoption can be extended to any considerable extent except in milking tests for cows where the scales are supposed to symbolize justice and equity, but even that has not proved a popular tribunal, and few there be that enter there. Judging by a scale of points and furnishing a score card duly filled up, giving the judge's estimate of the comparative value of points in the various exhibits, which is practically stating the reason why, has had a fair trial, has failed to give satisfaction to exhibitors or the public, and has been abandoned in making awards of prizes even in poultry shows, where, if anywhere, it might be expected to prove a success. Men differ as widely in their opinions of the comparative value of points as they do on the individual merits of animals or articles, judging from the general appearance. We do not contend that the prevailing system of fair management is perfect, and we are open to receive light on the subject and will be pleased to receive suggestions that will lead to a more excellent way.

Best Farm Journal.

H. N. BINGHAM, Simcoe Co., Ont.:—"Yours is the best farm paper I know of, and I have had the opportunity of reading the leading American and Canadian journals."

Arrangement of Horticultural Exhibits.

In our report of the horticultural display at the Toronto Industrial Exhibition, reference was made to the desirability of so arranging the exhibits that the judges should be entirely relieved from even a suspicion of partiality by having the exhibitors' names withheld from all exhibits until after the prizes were awarded, and then for the benefit of the exhibitors and the public the names should be attached to every exhibit. At first sight such an arrangement may seem difficult of achievement, but several years ago the general manager of the Winnipeg Industrial, Mr. F. W. Heubach, devised a system that answers admirably, and which, as he did not patent it, is available to other fair managers. The plan is as follows:

For each exhibit an entry card is made out, on which is given the name and address of exhibitor, and his number and the class and section of the exhibit. One corner of his card is perforated to form a coupon, and on this coupon is the exhibitor's number and class and section of the exhibit, corresponding to the card itself. This coupon is detached by the attendant in charge of the department when the exhibit is put in place, and given to the exhibitor, who produces it when he claims his exhibit at the close of the exhibition. The entry cards are provided with strings, so that they can be attached to the exhibits, and are enclosed in envelopes having the coupon corner cut out so the coupon can be torn off without injuring the envelope. On the outside of the envelope appears a *fac simile* of the enclosed card, with the exception of the name and address of the exhibitor, so that nothing appears on envelope to identify the owner of exhibit, except his entry number. These are to be left undisturbed until the judging is all done, and then the attendant in charge tears off the envelope and leaves the name of each exhibitor displayed on every exhibit. Herewith is reproduced as a sample one of Winnipeg's entry cards and envelopes:

WINNIPEG INDUSTRIAL EXHIBITION
1899—Manitoba—1899

Class..... Section..... Entry No.....
Article.....
Exhibitor.....
Residence.....

This ticket must be fastened securely to the exhibit, or in case of animals, to the pen or stall, and remain there during exhibition, or no prize will be paid.

F. W. HEUBACH,
GEN'L MANAGER.

This Envelope MUST NOT BE REMOVED
until Judges have made their awards.

Class... Section... Entry No...
Article.....

PLEASE ATTACH TO EXHIBIT.

The only improvement to this system that we could suggest, would be to have the coupon attached to the outside of envelope instead of to the card, and then have no opening whatever in the envelope, as we fancy it would be possible, if one desired, to squeeze open the envelope and read the names on the enclosed cards.

While we believe in the integrity of most judges appointed by the leading agricultural fairs, still it may be only human to lean a little toward a personal friend or to a favorite district of country, if there is room for doubt in the mind of the judge. The system above described does away with any temptation of this sort, and leaves the judges free from the suspicion of anything of that kind. The advantages and desirability of having the full name and address of exhibitors appear after the judging is over, is self-evident to need reference here. It is a system that is simple, and if the person in charge of the department, exhibitors, or district, is not satisfied with the system, it is easy to make changes. It is a system that is simple, and if the person in charge of the department, exhibitors, or district, is not satisfied with the system, it is easy to make changes. It is a system that is simple, and if the person in charge of the department, exhibitors, or district, is not satisfied with the system, it is easy to make changes.

Grain Competition for Farmers' Boys and Girls.

The following points are to be observed by those who send large heads of grain in the competition for the prizes offered by me. The prizes are as follows:—

Oats.		Wheat.	
First prize.....	\$20.00	First prize.....	\$20.00
Second.....	10.00	Second.....	10.00
Third.....	5.00	Third.....	5.00
Fourth.....	4.00	Fourth.....	4.00
Fifth.....	3.00	Fifth.....	3.00
Sixth.....	2.00	Sixth.....	2.00
Seventh.....	1.00	Seventh.....	1.00
Eighth.....	1.00	Eighth.....	1.00
Ninth.....	1.00	Ninth.....	1.00
Tenth.....	1.00	Tenth.....	1.00
Eleventh.....	1.00	Eleventh.....	1.00
Twelfth.....	1.00	Twelfth.....	1.00
Total.....	\$50.00	Total.....	\$50.00

The whole of each lot of 100 heads should be selected from one variety grown in one field, and only from a crop which has given a large yield per acre.

I shall want every competitor to furnish from the same crop 10 (ten) heads with the smallest number of seeds per head which he or she can find. But the number of seeds in the small heads will not be considered in making the awards.

Each lot of 100 large heads of grain is to be put in a small cotton bag, securely tied, and addressed: Professor Robertson, Department of Agriculture, Ottawa, Ont. They will be carried free by mail.

Each lot of ten small heads is to be put in a separate package, either of cotton or stout paper, and addressed in the same way.

A slip of paper is to be put inside EACH bag or package, giving:—

1. The name and address of the collector.
2. The name and address of the farmer by whom the grain was grown, and
3. The name of the variety of grain; also, if the information can be obtained:
4. The number of bushels per acre of the crop from which the heads were selected.
5. The date of ripening of the grain.
6. The class of soil on which it was grown.
7. Whether the field was manured.
8. What was the crop on the field in 1898.

The lots of grain, with the information, may be sent until the 1st of December. I would like to be able to make the awards in order to send the prizes to the winners before Christmas-time.

JAS. W. ROBERTSON,
Commissioner of Agriculture and Dairying,
Dept. of Agriculture, Ottawa, Ont.,
October 19th, 1899.

QUESTIONS AND ANSWERS.

Veterinary.

INDURATED UDDER.

W. B., Middlesex Co., Ont.:—"I have a grade cow which has never seen a sick day until about two months ago she came up with a caked udder, in the left hind quarter; it produced stringy milk for a few messes, but it passed off until only the first stream of each milking was stringy; but the cake has gradually worked into the other hind quarter, and from time to time it is much harder (and quite hard tonight); yet her milk is always good looking and tasting."

[Your cow has what is called indurated udder, the effect of inflammation of the gland. A greater or less portion of one or more quarters becomes quite hard, feeling like a lump. In some cases the induration does not increase, while in others there is a gradual increase of diseased tissue, accompanied by more or less inactivity of the quarter or quarters affected, with usually periodical alternation in the quality of the milk. The trouble is hard to combat, but care and perseverance is often followed by success. Apply the following ointment: Take iodine, four drams; iodide of potassium, four drams; vaseline, six ounces; mix, and apply to the hardened parts, with good friction, once daily. Treatment will probably have to be kept up for a considerable time.

J. H. REED, V. S.
Agr. College, Guelph, Oct. 30th.]

Miscellaneous.

COOKING FEED FOR CATTLE AND OTHER STOCK.

A SUBSCRIBER, Cumberland Co., N. S.:—"I have seen a great deal in the ADVOCATE in reference to mixed rations—small and large rations, etc.—for growing and fattening steers, but I have never seen anything in reference to cooked or raw feed. I cook a large quantity of feed for my stock, such as barley, oats, wheat—ground, of course,—also cornmeal. My neighbors say that raw feed is just as good, if not better. If they are correct I should like to save time and fuel. But if cooked feed is best, I do not begrudge either time or expense for my stock. I take good care of them, as every intelligent man ought to do."

[Prof. Henry, in his admirable work on Feeds and Feeding, after quoting a number of authorities upon cooking coarse forage for cattle, summarizes the results as follows:—"The advantages are very slight, and not worth the trouble of either building the fire, cutting the wood, or erecting the apparatus, to say nothing at all of these combined, with danger and insurance added." In addition to cooking feed for swine, the trustees of the Maine College, comparing up the results obtained at that institution during seven years' continuous feeding of cooked and

uncooked cornmeal to pigs, wrote:—"The results have in every case pointed to the superior value of uncooked meal for the production of pork." In reference to this matter, Prof. Henry says:—"To the assertion that stockmen who cook feed have the finest animals, the writer ventures the opinion that one who is willing to cook feed will usually give his animals many attentions which feeders generally pass by as not worthy of their time or notice. It is this extra care, and the larger variety of feeds usually supplied, rather than the cooking, which make animals of superior quality." While many agree in the main with Prof. Henry's conclusions, we would gladly hear from feeders who have made sufficient tests to enable them to pronounce in favor of either cooked or raw feed for cattle or other stock. Not a few hold to the idea that in swine-feeding greater gains are made from cooked or steamed feed, owing to it being more digestible than raw; but tests must be very carefully made to determine the question of actual profit. It is well, however, not to confuse the foregoing point with the advantages of supplying animals with warm feed in palatable form, particularly in cold weather. It is not reasonable to expect pigs to do well on a half-frozen diet. Foods, like corn, that have become hard and flinty, may be made more easily masticated by soaking or steaming; but cooking, according to many careful investigations made, does not appear to increase the digestibility of feeding stuffs. There is a pretty general opinion among horsemen, however, that feeding limited quantities of cooked barley or oats to horses has a decidedly advantageous effect.]

FALL TREE PLANTING—STALLION RUBBING HIS MANE.

YOUNG FARMER, Waterloo Co., Ont.:—"Would you be kind enough to let me know, through your valuable paper, if it would be advisable to plant young maple and basswood shade trees this fall. Will they grow if planted during November as in the spring? I have hardly time to plant them then. Please give me instructions how to plant. I have a three-year-old stallion that has been rubbing his mane quite a bit. What shall I do to make him stop it? He is in good health; am working him since season is over."

[1. See FARMER'S ADVOCATE of October 16th, pages 581 and 582 (Eastern edition).

2. It is not uncommon for stallions to rub their manes, and the habit is not easily stopped when once it has become established. The trouble may be from the presence of small lice, which can be destroyed by frequently rubbing well into the skin creoline, 2 ounces, diluted with 1 quart of soft water. Any of the sheep dips or cattle washes advertised in our columns will answer the same purpose. It would be well also to give in teaspoonful doses twice a day in his feed nitrate of potash and sulphur, in equal parts, for two weeks. This will cool his blood and help to allay irritation.]

Chatty Stock Letter from Chicago.

FROM OUR OWN CORRESPONDENT.

Following table shows current and comparative live stock prices:

	Extreme prices now.	Top Prices		
		Two weeks ago.	1898	1897
Beef cattle.				
1500 lbs. up.....	\$5 65 to 6 70	\$7 00	\$5 70	\$5 40
1350 to 1500 lbs.....	5 25 to 6 50	6 90	5 85	5 30
1200 to 1350 lbs.....	4 75 to 6 40	7 00	5 75	5 20
1050 to 1200 lbs.....	4 35 to 6 30	6 45	5 60	5 10
900 to 1050 lbs.....	4 25 to 6 00	6 15	5 50	5 00
Hogs.				
Mixed.....	4 10 to 4 50	4 85	4 00	4 05
Heavy.....	3 85 to 4 45	4 77	4 00	4 00
Light.....	4 05 to 4 45	4 90	4 00	4 05
Pigs.....	4 00 to 4 30	4 82	3 85	4 00
Sheep.				
Natives.....	2 50 to 4 15	4 50	5 25	4 55
Western.....	3 25 to 4 15	4 10	4 65	4 30
Lambs.....	4 00 to 5 75	6 00	6 10	5 15

The cattle situation is not quite so good as it was awhile ago. The end of the Western Range season is close at hand, and buyers feel that they want to buy the medium to good native beef, retail, at about the prices they have been paying for the Western rangers, namely—\$4.50 to \$5.00.

The very dry weather is having a bad influence upon the demand for feeding cattle.

A Chicago man, back from a trip through western Iowa, reports hogs selling to country buyers at \$3.50 to \$3.80 for the different grades, with offerings none too plenty at those figures. The price of new corn is starting at 17c. to 20c. Pastures are the barest in over ten years, the country needing rain badly.

D. Rankin, of Tarkio, Mo., had on the market 128 head of 798-lb. fat yearling steers, at \$5. This is one of our great cattle feeders, and a good many people are wondering why, with corn so plenty and cheap, he is marketing such young and light cattle.

The writer recently had a pleasant chat with Mr. Conrad Kohis, of Deer Lodge. Mr. Kohis is a pioneer in the western range cattle business, and also in the business of breeding pure-bred cattle. On the range in 1868 he bought 1,000 cattle, mostly high-grade Shorthorns, and ever since he has been a breeder of that class of stock. He also has a fine herd of Herfords. He is of the opinion that the days of the western cattle grower are numbered, and that the number is not large. The encroachments of sheep-growers are steady and strong, and it will be but a few years until there is no public grazing land that will support cattle. Of course, he considers that the government is to blame by giving sheepmen a bonus, in the shape of a high tariff on wool. Mr. Kohis says it is his intention hereafter to provide winter feed, in the shape of hay, to carry his cattle through the severe winters. Last year Mr. Kohis marketed 485 cars of cattle in Chicago, and did not come to see any of them sold. He said he could not well give stronger testimony of his confidence in the integrity and ability displayed in the live stock commission business.

Stock Inspector Bray, of Medicine Hat, furnishes the following figures, of stock shipped from that district during the past four years, showing a most satisfactory increase in this great industry:

1896.....	402
1897.....	1813
1898.....	4131
1899.....	4218

with 1,000 or 1,500 head yet to go out, which will make Medicine Hat the largest shipping point in the West.



The Poisoners.

A STORY OF THE DAYS OF THE GRAND MONARCH

The fires which had wrapped the Place de Greve in a crimson mantle, and sent Lavoisin and Lavigoreux to their last account, had been burned out for many days. Not even the ashes were left to tell the tale of the awful end of these two old hags whose poison vials had put to sleep so many scores of inconvenient husbands, unloved wives, and pestering mistresses.

But if the stake was now cool and inert, waiting silently and patiently for new victims to devour, Paris had not yet forgotten the sensational story of those poison sellers. Had not their customers included some of the greatest in the land? Did not their trial bring to light in all its sickly terror the whole hideousness of this poisoning mania that was rampant throughout the length and breadth of fair France?

And as though to keep the horror of their names and their history still fresher in the public mind, Mlle. Moliere had caused them to be placed in a play, "La Devineresse," the joint work of Thomas Corneille and Devise.

Already for three nights the theatre in the Rue Mazarine had been crowded to excess to see this play. The well-timed idea of Moliere's widow was raining lives into the treasury with a merry jingle that made the Comedians du Roi belaud her enterprise and wisdom in unmeasured terms.

On the third night of the production the King had come, with the president of the Chambre Ardente in his train—that same Chambre Ardente which His Majesty had endowed with such extraordinary powers for the detection and punishment of those guilty of the practice of slow poisoning.

"I like the play," Louis XIV graciously avowed to Mlle. Moliere in the course of the evening. "And who knows but what it may do something to stay this ghoulish mania which seems to run riot among my people?"

"Or it may wipe out the Troupe Royale," murmured the Councillor of State, who hated the players and envied the favors the King showered upon them. "These poisoners, as I know full well, are revengeful fiends; and they will not like your play, madame."

The King looked displeased at the remark. Louis was in mortal fear of himself being a victim of the mania. At the English court it was a favorite joke that the King of France would not eat fish because it was poison.

"Perhaps, then, we ourselves are in danger of their revenge for daring to punish them," he cried. "You frighten madame, monsieur, and do yourself no credit by raising such fears."

M. le President went a trifle pale, and paler still as Louis promptly turned his back upon him. But Mlle. Moliere's nature was too light and frivolous to be impressed by the gloomy forebodings of the Councillor, and she returned to her dressing room so mightily pleased with the King's kindness that she speedily forgot all about them.

The next evening she walked from her house to the theatre leisurely and alone. The night was dark but fine, and the air braced and freshened her. At the threshold of the theatre, as she reached out to open the private door leading to the stage, a man suddenly stepped out of the shadow and thrust a note into her hand.

"Mlle. Moliere," he said, and made to hurry away, but the hilt of his sword caught in her cloak, and as someone within flung open the door the light fell for an instant full on his face. A pale, repulsive face, with a deep scar on the left cheek—that was how it struck her as he hastily snatched himself free and disappeared into the night.

In her dressing room she opened the letter and read: "If 'La Devineresse' be played for two more nights Lavoisin will be revenged. There are those who will see that her name is no longer reviled. The King burnt her at the stake, and now you place her on the stage to withstand the fires of the mob's derision. Beware! This is no light warning. In two nights you must have a new play, Mlle. Moliere, or—"

The actress blanched a moment and convulsively grasped the arm of her chair; then she shrugged her shoulders and laughed lightly and scornfully. "Freycinet," she said a little later, after scribbling a note and inclosing with it the threatening missive, "take this at once, Freycinet, to the Chambre Ardente."

As the door closed upon the departing messenger a tiny sigh of relief escaped her, and she proceeded to make the toilet her part demanded.

With that sigh her fears had vanished. She slept as soundly and as peacefully that night as she had ever slept. She trusted implicitly to the dark and tortuous machinery of the Chambre Ardente to protect her, and after she had dispatched the letter gave the matter not a moment's further thought.

Thus it was that she leaped to her feet with an exclamation of surprise the next afternoon when a servant announced a gentleman from the Chambre Ardente. The new play of Pradon's which she had been reading was tossed aside.

"His name?" she asked. "M. Dupin." "He is without?" "Yes, madame." "I will see him at once, certainly."

A moment later a tall, lean man, attired neatly in the soberest of colors, stepped into the room. He bowed and waited until the servant had retired. Mlle. Moliere spoke first. "You have come from the Chambre, monsieur, about the letter I sent?" "I have, madame." "Am I being played with, think you, or is it a grave matter, M. Dupin?"

He smiled somewhat sarcastically. "There is no hoax about it, I can assure you. It is meant earnestly enough; of that there can be no doubt. But how the revenge will be attempted we know not. It may be that a servant will be bribed to drop some deadly cordial into your food, or that a letter steeped in some powerful poison—a poison that will permeate the pores of the skin upon the merest touch—will be sent you; or, again, it may be that open and violent outrage will be attempted. Ah, you shudder, madame, but you know not of the horrors which are taking place day by day around us. The Chambre knows. This mania is spreading daily. No one is safe from subtle attack. Death is lingering at our elbows all day long, and in the most silent watches of the night."

He grew impassioned as he spoke, and his eyes ever and anon glistened with excitement. But suddenly he controlled himself, and was cool and inscrutable and smiling again. "You terrify me—oh you terrify me!" the actress exclaimed, putting her hands to her eyes as if to shut out the frightful vision his words had conjured up.

"Pardon, madame, but I only wish to show you your danger, and to impress upon you the necessity to be watchful. However, I think you need have little or no fear. The Chambre has its hands upon your enemies. I believe, at this very moment."

She gave a little cry of delight. "Of course," he went on, "the safest course to adopt would be to stop the play at once. Will you do that?" "No; I will not do that," she replied slowly. "It is too great a success."

"Could you, then, identify the man who gave you the letter?" "Yes—oh, yes; I can see his face, his horrible face now!" "Well, then, you must help us in this way. After the play to-night go to the Place de Greve. You will be met there by one of our agents, who will conduct you to one of our secret houses in the Rue de Sainte-Croix. There we have several men under arrest, and you must see them. Had the man a scar under the left eye?"

"Yes, yes—a deep scar. I remember that distinctly." "Many men have such scars, but still this may be the right one. You will come, then?" "Yes, I shall see you there, monsieur?"

"Yes. And, by the way, has any other agent of the Chambre called? You see we work secretly, and hardly know each other's plans and movements." "No; no one else has been." "Ah! then au revoir, madame. To-night after the play, in the Rue de Sainte-Croix."

And he made obeisance and went out.

Mlle. Moliere was depressed and nervous that evening, despite her inherent inability to take most things seriously. She thought of the words of M. Dupin, and feared to eat, feared to go out, feared to stay at home, feared almost to look around, and yet kept continually glancing rapidly and timidly over her shoulder. The customary hour, however, found her, as usual, on her way to the theatre, thickly veiled and cloaked. She took quite a circuitous route, avoiding all the quiet streets and mixing as much as she could among the crowd.

At the corner of the Rue Mazarine, in her haste, she ran into a drunken man, who would have turned upon her and struck her but for the gallant intervention of a passing gentleman. A crowd collected all in a moment, as crowds will collect, and for one brief instant she caught sight, amid the throng, of a face that chilled her with fear. It was the scarred, reptile face of the deliverer of the threatening letter. She would have swooned but for the excitement buoying her up.

So the Chambre Ardente could not have the right man under arrest, after all. That was her first thought. Was he not uncaptured and walking abroad? What should she do? Perhaps, though, she argued as she sped along, she was mistaken in the face. There were plenty of scarred visages in Paris, as M. Dupin had said. She determined in the end, as women will determine—without a vast amount of consideration—to keep her appointment in the Place de Greve, but meanwhile, arrived at the theatre, she hastily scribbled a note and dispatched it to the Chambre. It ran thus:

"Have just seen in the Rue Mazarine the man who gave me the threatening letter—at least, I believe it was the man. I will, however, come to-night to the house in the Rue de Sainte-Croix, as I promised your agent, M. Dupin, this afternoon."

The play was over, and the audience had dispersed. The streets, softly illumined by a newly-risen moon, were still and deserted. Mlle. Moliere, veiled and hooded again, walked swiftly in the direction of the Place de Greve. As she entered the square, recently so wild and lurid with tongues of hungry flame—hungry for human flesh—but now so peaceful and beautiful in the delicate light, she espied a figure approaching her.

"Mlle. Moliere?" he queried in a deep, low voice when he came near. She nodded her head. "Follow me," he heeded. They traversed a labyrinth of streets, and no further word was spoken until, a quarter of an hour afterward, the man rapped gently at a house door in a queer little side street.

"This is the Rue de Sainte-Croix," he murmured. The door was instantly opened. "Enter," he said, and madame went in, with her attendant at her heels. The passage was pitch dark. She stood still affrighted. "Where am I?" she cried. "This all right," said a voice. "Oh, is that you, M. Dupin?"

"Yes, 'tis I, madame." "Thank Heaven! I began to fear I had been entrapped." A hand took hers in the darkness, and conducted her several yards. Then a door was opened, and they entered a dimly-lighted room, half laboratory, half library.

"Pray be seated, madame," said Dupin genially. "I think I've settled this affair," he said. "I should think so! Have some wine, first, madame, before you look on the scarred, ugly faces of the rogues I have manacled here. Besides, you must be exhausted after your walk, and possibly frightened, eh?"

He laughed pleasantly as he poured her out some wine. It struck her what a courtly, affable man he was. "Drink," he said. She emptied the goblet at a draught, for, in truth, her nerves were all in a quiver, and replacing it on the table looked round at her host and laughed back at him with a well-assured confidence and gaiety. But as her glance fell upon him her laughter ceased. She gazed at him, first in wonderment, then in abhorrence. M. Dupin was glaring at her fiercely.

"What is it? What is it?" she cried, shaking like a leaf. "What mean you?" "It seemed another being, this vindictive figure scowling down at her. Hate and gloom played hide and seek in his eyes. He was transformed into a veritable ogre. And suddenly, as she stared at him, petrified, he threw up his arms and burst into unrestrained, demoniac laughter.

"You've drunk my wine, Mlle. Moliere," he cried out in a moment in measured tones, his teeth clenched, but his voice calm. "Let me tell you it was poisoned." The actress jumped to her feet in unheeded panic. "Mon Dieu! Mon Dieu!" she screamed. "Monsieur, what can you mean? What have you done?" "You will know all soon enough!" he replied with tantalizing precision. "The poison takes five hours to kill. There is time to repeat the story many, many times." He paused a second, and then a sudden excitement took hold of him. "I am Lavoisin's son," he cried, "not M. Dupin, not an agent of the Chambre Ardente—Lavoisin's son, the son of the woman you have put into your cursed play. I love my mother, madame. I saw her burn, frizzle before my eyes, and I laughed—ay, laughed—laughed with madness and rage to hear her old bones crackle, to see her old flesh bake. And since then three who sat in high places have somehow died—died quite naturally, though suddenly. Ha, ha, ha!—died through me, through my medicine, you understand? And now you will follow them. In five hours you will fall asleep never to waken, and no one can tell you have been poisoned. In five hours! And no one could help you even if you were not safe and sound here; for I only know the antidote which can destroy the poison's work."

He pulled a vial out of his pocket, and held it up in his hand, laughing again with a frenzied delight. And, as he laughed, a hand came through the slightly open door, and, of a sudden, snatched the vial from his fingers. Then, like a flash, in the twinkling of an eye, three men dashed into the room. There was a fierce struggle for a moment or two. Strong men panted as in the throes of death. But it was soon over. Pounced on unawares, the poisoner was readily secured and gagged and carried forth.

Then the leader of the newcomers stepped up to Mlle. Moliere where she lay on the floor, prostrate and unconscious. He chafed her hands and threw water on her forehead. "What is it—oh, what is it?" she murmured in a while. "Where am I?"

"Drink this at once," he rejoined. "It is an antidote." She put the bottle to her lips and gulped its contents down.

"You have had a narrow escape, madame," her rescuer went on, supporting her in his arms. "Lucky it is you wrote to the Chambre Ardente to-night and mentioned the Rue de Sainte-Croix. We were already on the track of the writer of the threatening letter, and we knew it was a trap when you mentioned our agent. Our agent, forsooth! But we let you keep the appointment you had made with him in order to effect a capture. We watched you come into the house, and then we quietly went to work. We have taken five of them—five, madame—all in the act of concocting vile poisons; and this Lavoisin is the worst devil of them all. But let me now conduct you home. To-night you have done the King some service."—*Afred E. Snodgrass, in the Cornhill Magazine.*

THE QUIET HOUR.

Onward and Upward.

I wish to speak to-day to those who have given themselves up body and soul to the service of Christ. To those who wish to serve Him truly all the days of their life, and yet, who find as each day closes that their good resolutions have proved weak and brittle, and that they have fallen into the very pitfalls they were most determined to avoid.

Is your life "shining more and more unto the perfect day," or is it fitful and cloudy, with only occasional bursts of sunshine? If you are not making progress in the spiritual life—you hardly know why—and are growing dispirited and discouraged, would it not be wise to sift your own case thoroughly, and find out what is really the matter?

The trouble is usually caused by careless, hurried, or formal prayers. You "say your prayers" twice a day, of course; but is that quite the same as "evening and morning, and at noon, will I pray, and cry aloud: and He shall hear my voice." You see David's custom was not only to say his prayers, but to pray. More than that, he expected God to hear his voice. Have you any such expectation? Without it you need hardly be surprised if you do not receive an answer. To say one's prayers carefully, attentively, reverently, is a good thing in its way, but it may be a very different thing from praying.

The opening words of the Lord's Prayer, which are so often hurried over as though they had little or no meaning, should bring us to the foot of God's throne, and inspire us with the true spirit of prayer. Prayer is not saying words into the empty air, it is direct intercourse with a Person. To look up into God's face, to speak directly to Him, is the first thing to be done. We may "come boldly to the throne of grace," because we are not addressing a stranger, but our Father. Looking up to Him with reverent, adoring awe, for He is in heaven, as we also are in heart and mind, our petitions will have more earnestness and meaning in them. Although the praises of innumerable angels are sounding in His ears, we may be sure of patient, loving, undivided attention.

"He listens to the silent tear, For all the anthems of the boundless sky."

Think how carefully the Prodigal Son prepared the speech which he intended to make; and yet, when he was actually in his father's presence, how little need there was for any speech. His father understood him and he saw more deeply than ever before into that father's loving heart. Prayer does not always need words; sometimes the highest adoration and communion with God is too great for language to express. But, whether your prayers be long or short, the first step is to put yourself consciously into the very presence of God.

Then there is another thing which these first words of the Lord's Prayer teach about the very essence of prayer. It must be unselfish. The first word, "Our," proves this, as well as the petitions which follow. To pray for yourself alone is impossible if you use the Lord's Prayer. As Joseph did solemnly protest, saying, "Ye shall not see my face, except your brother be with you"; so Christ, our brother, said, in effect, when He gave this prayer to the disciples.

In this, as in all else, we must follow Him. We are told that the names of the children of Israel "shall be upon Aaron's heart, when he goeth in before the Lord: and Aaron shall bear the judgment of the children of Israel upon his heart before the Lord continually." Is not that what our High Priest is doing always? "He ever liveth to make intercession for us." He bears our names upon His heart before the Lord continually, because He loves us with an everlasting love. This we must do, too, if we would "see His face." We are specially commanded to pray for enemies, and certainly must not be forgetful of friends.

Try to remember, all through the busy day, that you are still in the very presence of God. As often as possible lift up the soul afresh by a momentary glance into His face. How near He is! When things go wrong and we are worried, cross, or irritable, how the gentle touch of His loving hand makes the heart bound with joy—joy that the world knows nothing of.

Onward and upward! What a glad meaning there is in everything when "Our life is hid with Christ in God." Whether the days be filled with pleasure or pain, temptation, sorrow, or hope fulfilled, all things come from our Father's hand, all things draw us nearer to Him. Looking up fearlessly into our dear Lord's loving eyes, we take from His hand the gift He offers each day and hour, even though it be a cross. He gives it, that is enough.

HOPE.

tip to toe, from nose to outstretched tail. Then, to our greater bewilderment, we saw that he was licking the body from end to end, making straight parallel lines of saliva along its entire length, which, with the rays of the setting sun falling on it, exhibited all its varied hues, and made us long for its possession, that we might carry it away with us. But the ducky had something better to do than indulge a benevolent sentiment for our gratification. For ten minutes or more he continued his preparations, until he made four or five streaks of saliva, which shone like satin ribbons, laid horizontally on the dead body from end to end.

Then blacky rose and shook himself, and, having done so, took up his position at the head of his victim and calmly gazed upon him, with the first gleam of satisfaction in his bright little eye. We were still full of wonder and conjecture as to his purpose, interment of some kind being the only thing we yet thought of. But then we saw him calmly open his mouth to its utmost capacity and take into it the entire head of the defunct rattler; then he gulped and swallowed; then rested; then another gulp and another swallow; and so on until he had tucked into him the whole body, a foot longer than himself; and then, with the tip of the tail still dangling from his mouth, he dragged himself into the scrub, and thence probably into a gully, there to spend a month or more digesting his ponderous meal, and "fighting the battle o'er again" in blissful dreams.

The Canadian Press Association Trip to the Northwest, 1899.

(Continued from page 549.) NOTES FROM VANCOUVER.

We promised in our last issue some description of Stanley Park, and we feel that our effort can be but feeble, for it is almost beyond description. We can only hope that more exhaustive accounts have been or will be read by those interested, for this wonderful spot requires a whole pamphlet to itself. However, we feel bound to say something, at least. Its magnificent natural advantages make Stanley Park stand out easily as the park of the world, and as these natural advantages are being cultivated to the highest degree by large expense (\$5,000 to \$6,000 yearly) and the most careful supervision, we can scarcely realize what Stanley Park will be in the near future, for it seems to be almost perfect now. The park spreads, as a peninsula, between English Bay and Burrard Inlet. It is reached by well-graded roads, south-west by the Bay, and by a road along the shore of the Inlet. Extending westward about a mile and a half lies this unrivalled 1,100 acres, which seem to have surely been intended in the far-off time of its junglehood for the purpose for which it is now appropriated, viz., to delight the eyes, invigorate the body and enlarge the mind of us insignificant humans—all these wonderful places make one feel very small and helpless! The park ranger's house is on the banks of Coal Harbor, and from this point winding roads run along the edge of the park for more than seven miles. This road is one of the finest driving and bicycle tracks to be found anywhere. Off Brockton's Point on the east lies Deadman's Island, of five acres and occupied by fishermen who have held squatter's rights ever since the days of the Indians. Between this island and the mainland lies a quiet inlet which is admirably adapted for rowing and yachting, as it is protected from the channel current, which sweeps round Brockton Promontory, and also from the Gulf of Georgia breezes. At Brockton Point there are fine recreation grounds, controlled by the amateur sportsmen of Vancouver, and there is a cindered track for bicycle races, baseball, lacrosse, cricket, etc. From this point the park road runs past several cabins of the original natives. One is continually coming across these little traces, as it were, of a primeval time. From the bungalow on Prospect Point, about 250 feet above the water, we get a magnificent view, and can see the mouth of the Capilano River, across the Narrows, where the melted snows come rushing from the mountains on the north, and where the lonely rock, Siwash, which can be seen rising from the water, reminds one of a cruel wreck (the ship Beaver) which happened there a few years ago. The road now runs gradually down to English Bay and passes the reservoir where the city water supply is pumped from Capilano Canyon through mains submerged across the Narrows. There are two long bathing beaches at English Bay, which is rapidly growing to be one of the most fashionable suburbs of Vancouver. From English Bay the road goes round Coal Harbor, and thus makes a complete circuit of the park. This splendid road was begun in 1887, costing \$25,000. It is paved with shells, and certainly stands second to no other road known to travellers. Some magnificent specimens of timber grow in the interior of the park, and at the western extremity is a Douglas fir 10 feet in diameter and 300 feet high. In the center of the park is a lovely lake of about eight acres and so surrounded by forest that you hardly know it is there until you almost run into it. It is intended to make this lake the home of swans and other water fowl. There is already a fine "Zoo" collection; "Billy," a goat who hails from Honolulu; wild cats, lynx, possums, bears, monkeys, guinea pigs, rabbits, coons, porcupines, and laughing jackass! As for the deer, they rank amongst the "oldest inhabitants," as they owned the park peninsula before this city of Vancouver was thought of. There are some funny

stories about many of the animals and birds. For instance, some bears were presented to the "Zoo" by a leading barrister of the city, who received them from a grateful Indian whose case he had defended. Two eagles were caught and presented by a Kootenay miner. The only animal bought is a mountain lion. Then there are pheasants, swans, doves, parrots, cockatoos, canaries, etc. So, you see, the ducky birds are accumulating, and there will be, after all, some fine bird concerts some day when they have practised! Added to the unequalled views to be seen at all points, are the most lovely winding paths of sylvan charm, where one can wander along, or sit and dream, lost in delight, in one of the endless nooks of ideal beauty which meet one at every turn.

In writing of Stanley Park one is apt to forget our journalistic limits, and again we feel a little guide-booky. In small space it is utterly impossible to give an adequate idea of this marvellous place—so old, yet so new—like the timeworn story of young love itself. Now we feel rather sentimental, so we will wind up with a novel experience in the form of an invitation lunch (very swell) on board the steamship "Empress of China," bound for the Orient. This vessel is most superbly appointed—such cabins and such furnishing! All the stewards were Chinese, attired in flowing white garments, caps on head, pigtails galore! They wait at table beautifully, so deft and neat-handed. There were about eight courses, one of which was crab, and for those to whom crab was a novelty, it was slightly non-plussing to quite know how to tackle him! They do say that an uninitiated traveller to this city once called it a "big bug" and utterly refused to eat it! Well, with the aid of nut-crackers and your own good fingers you can get a lot of solid gastronomical enjoyment out of the "big bug," and we wouldn't mind bringing a train load back with us. It was both interesting and amusing to watch the Chinese crew at their dinner. They squatted on the lower deck, ladled rice out of a big basket into little bowls, then fish from a big pan—and all the time gabbling away like mad. Others were in a corner gambling (their almost constant pastime) and did not seem to notice us staring at them. These Chinese are queer customers. They swarm out here and are much employed. If you can get a really good Chinese servant, you are lucky, because they are clever and do everything; but the good ones are rare, and the incompetent ones legion. Their independence is appalling. It is no unusual thing for you to walk into your kitchen and find Mr. Wo Ling—Sing—Ping—calmly putting up his belongings in a basket (generally yours), and he will just say he is "tired" and wants "to go home!" One lady we know told her cook he must go, whereupon he told her he had meant to go. "Anyway you talkee too muchee for a woman!"

Puzzles.

[The following prizes are offered every quarter, beginning with months of April, July and October: For answers to puzzles during each quarter—1st prize, \$1.50; 2nd, \$1.00; 3rd, 75c. For original puzzles—1st, \$1.00; 2nd, 75c.; 3rd, 50c.]

This column is open to all who comply with the following rules: Puzzles must be original—that is, must not be copied from other papers; they must be written on one side only of paper, and sender's name signed to each puzzle; answers must accompany all original puzzles (preferably on separate paper). It is not necessary to write out puzzles to which you send answers—the number of puzzle and date of issue is sufficient. Partial answers will receive credit. Work intended for first issue of any month should reach Pakenham not later than the 15th of the month previous; that for second issue not later than the 5th of that month. Leave envelope open, mark "Printer's Copy" in one corner, and letter will come for one cent. Address all work to Miss Ada Armand, Pakenham, Ont.]

1—CHARADE (Partly Phonetic).

My first is falling cold and drear— My welcome second is not near— Afar my stormy third I hear Across the wild sea sweeping.

How changed the scene since last I stray'd Through this now silent woodland glade, For then my whole sweet music made, Her moon-lit vigil keeping.

Now the green trees their leaves have shed, My whole is with the summer fled, And she I loved, lies cold and dead, My third her requiem sighing:

The spring that verdure may restore— That song may echo as of yore— But those pale lips will smile no more, To love's fond voice replying.

L. B. FORCE.

2—ARITHMETICAL.

1 8 6 1

1 6 0 8

The peculiarity of these numbers is that if you add them, add again, without changing the figures subtract them, the sum is not much more than half as great as the difference.

F. L. S.

3—BEHEADINGS IN ANAGRAM.

(When beheaded, transpose the remainder.)

- Behead a chair and leave a foreigner.
" a fish and leave a small animal.
" a vessel and leave that which is used in a game of cards by gamblers.
" that which is sweet and leave an animal found in Asia.
" a tree and leave to venture.
" a fish and leave an alcoholic beverage.
" a bird and leave a vessel regularly trading to and from certain ports.
" a fish and leave a girl's name.

ROLLY.

4—DOUBLE ACROSTIC.

Primals and finals will name what every farmer needs to make him happy and prosperous.

1, Re-lieving; 2, a vulgar name of an Italian; 3, to hazard; 4, cross; 5, belonging to Arabia; 6, to rend; 7, nothing mixture; 8, in geology, to come out to the surface of the ground; 9, exulting.

"ARRY 'AWKINS."

5—NUMERICAL.

My 9, 6, 11, 17, 15 is found in the Klondike, and you generally find him 1, 3, 18, 7, 8, 16. When he finds gold he says 2, 14, 5, and does not need a 17, 4, 10, 13 to wash it with. My whole is one of the best literary efforts of the present time.

"ARRY 'AWKINS."

6—TRANSFORMATION.

I am a little word That has of letters three, No person on the earth Can live here without me.

Give me another form, But do not change my sound, Another little word Meaning before is found.

My letters now transpose And put a mark between, And if you have done right, At all times I will mean.

My sound remains the same Through all these changes three, Now change my form again, And an eldest brother see.

M. N.

7—DIAGONAL.

- 1—Pertaining to an ass.
2—A feeler.
3—A state of bondage.
4—To be overheated.
5—A wanderer.
6—To love unduly.
7—To fancy.

Diagonal—to resolve into parts.

M. N.

8—SOVEREIGNS.

Example, The king of speech—talking.

- (1) The king of "parching."
(2) " " " "receiving."
(3) " " " "composing."
(4) " " " "friendship."
(5) " " " "the oven."
(6) " " " "sight."
(7) " " " "throwing."
(8) " " " "the mind."
(9) " " " "nailing."

L. B. FORCE.

9—LINKADE.

This is a form of the charade that overlaps. E.g.—fortune, fort, tune.

A lusty knight was Sir Galahad; And pure of heart was he, His tough two couched with Sir Launcelot, In the deeds of chivalry.

But the feats of prowess failed to charm, A voice to his heart did speak, "My loved one, renounce this dwelling of sin, And a life of seclusion seek."

Sir Galahad sought the convent gate, At the chime of the vesper's bell, Many a one did the good knight keep In his bare and lonely cell.

But a vision came in the lonely night To the watcher worn and pale, Through his grated panes a long beam stole, It was the Holy Grail.

And it dyed the walls of his narrow room With a gold and crimson shade, The vision passed, and the good knight knew That his all had been repaid.

"ESSEX."

10—HIDDEN PROVERBS.

- (a) Pat of spemori, apt of trofeg.
(b) Sit yemno aksem eht ream og.
(c) Dshiel gip tub rthafse coban.
(d) Wot fo a rated domsel erage.
(e) Het saneth ear wansyl ta hufat.
(f) Revey bane sha its kalbe.

"PILOT."

11—AUTHORS TRANSPOSED.

- Leringlawilaz.
Yaanfnggesmnteil.
Lepillwndpishe.
Essnmaaalubir.
Veedcarhriari.
Terrwngniboob.

ROLLY.

12—TRANSPOSITION.

1—She sang, and combed her golden locks, And lured the sailors on the rocks.

2—When Johnny drives by father's side To hold them is his greatest pride.

3—Her brother plays a violin, What helps his bow sweet sounds to win?

4—I saw my mother do this thing, With water carried from the spring.

"ESSEX."

13—RHOMBUS.

x x x x x x x
x x x x x x x
x x x x x x x
x x x x x x x
x x x x x x x
x x x x x x x
x x x x x x x
x x x x x x x

Across—1, Mastoidal; 2, a large dog; 3, an omen; 4, flowing water; 5, a married partner; 6, places of sale; 7, rules.

Down—1, in DIN; 2, indicates number of leaves made by folding a sheet of paper; 3, a vehicle; 4, a solid bulb-shaped root; 5, a fan machine; 6, a bit of food; 7, the auks; 8, flowers; 9, stint; 10, a faint tinge; 11, often; 12, a conjunction; 13, in DIN.

F. L. S.

Answers to Oct. 5th Puzzles.

- 1—N V, envy.
2—Winipeg, Winnipeg.
3—(1) Duck, (2) wolf, (3) man, (4) cook, (5) friendly, (6) society.
(7) Sandwich, (8) Solomon, (9) Caroline.
4—Robin Hood.
5—End less.
6—Sadducee—Pharisee (fair I see).
7—Leicle—bicycle.
8—David Copperfield.
9—Her ring.
10—Uca.

SOLVERS TO OCT. 5TH PUZZLES.

"Jack & Jill," "Maud," "Diana," "Willwin," M. R. G., "Sigma," "Pilot," "McGinty," "Rolly," J. F. L.

ADDITIONAL SOLVERS TO SEPT. 20TH PUZZLES.

"Pansy," "Essex," "McGinty," "Pilot," M. N., "Jack & Jill," "Thisle."

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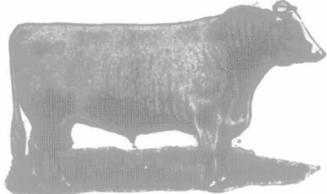
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SHORTHORNS

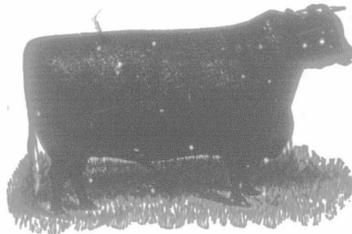
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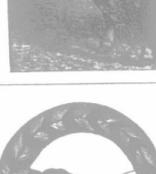


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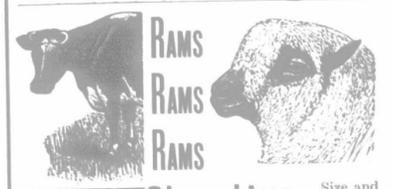
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is acknowledged and established, as testified to by its many users.

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GENTLEMEN, A year ago, after investigating and trying other makes of separators, I finally concluded to buy a No. 2 De Laval Baby machine. I have run it every day since, skimming the milk from 14 cows. I take pleasure in saying that it does perfect work, whether the milk is just from the cow or of lower temperature; that it is perfect in construction, easily turned, quickly cleaned, and accomplishes everything you claim for it.

Yours truly,
THOM. McMILLEN.
Springfield, Man., June 3rd, 1899.

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

FORT ROUGE POULTRY YARDS.

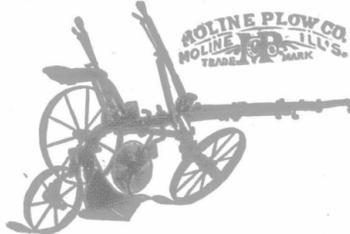
High-class Golden Wyandottes, Langshans, White Wyandottes, Plymouth Rocks, Indian Games, Light Brahmans, Pekin Ducks, Pearl Guineas, and Bronze Turkeys. A few choice birds for sale; also Belgian Hares and Fancy Pigeons. Write for circular.

S. LING & CO., WINNIPEG, MAN.

BLACK MINORCAS.

Young stock for sale—some beauties. Satisfaction guaranteed.

m A. M. ROBERTSON, KEEWATIN, ONT.



The Good Enough Sulky Plow

CAN NOT BE BEAT.

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

Write for illustrated circular. It will pay you.

MINNESOTA MOLINE PLOW CO.

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

W. A. DUNBAR, VETERINARY SURGEON,

5½ JEMIMA STREET, - WINNIPEG. Communications by letter or telegraph promptly attended to.

TELEPHONE 56. 25-2-y-m

R. A. BONNAR, Barrister, Notary Public, Conveyancer, Etc.

Office 494½ Main St., Winnipeg, Man. Special attention to collections. Solicitor for "Farmer's Advocate," Winnipeg. 24-a-m

Scotch Collies

Pedigreed Collies from my prizewinning stock. Dog Pups at \$5.00 each. Will sell a number of Brood Bitches. I am obliged to reduce my stock, and will sell cheap. Also Fox Terriers.

W. J. LUMSDEN, HANLAN, MAN.

IMPORTANT COMBINED AUCTION SALE

90 HEAD of registered stock, at Maple Cliff Farm, Hintonburg, within one mile of the City of Ottawa (electric cars to farm), Tuesday, Nov. 28th, 1899, at 10 o'clock, consisting of 10 Ayrshire bulls, 20 Tamworths, 20 Improved Yorkshires, 10 Large English Berkshires, 10 Chester Whites, 12 Duroc-Jerseys, 8 Poland-Chinas. No reserve. Write to the proprietors for catalogue.

R. REID & CO., Maple Cliff Farm, HINTONBURG; J. G. CLARK, Woodroffe Farm, OTTAWA. T. W. McDERMOTT, Prov. Auctioneer

ESTABLISHED 1864.

HILLHURST FARM

HACKNEY HORSES, Carriage type, Connaught blood.

SCOTCH SHORTHORNS, Beef and milk. Scotch Hero (bred by W. Duthie) heads the herd.

Shropshire, Dorset Horn, and Hampshire Down Sheep.

M. H. COCHRANE, Hillhurst Station, Compton Co., P. Q.

HACKNEYS



We have on hand several Hackney Stallions, both imported and Canadian-bred; all of the best strains, and all prizewinners at our best shows. The right time to buy stallions is during the fall and not when spring comes along. At the latter time all entire horses have their routes laid out, and owners cannot afford to disappoint their patrons. Apply now and get reasonable quotations. Send for catalogue and particulars to **HORACE N. CROSSLEY,** Rosseau P. O., Dist. Parry Sound, Ont.

English Shire and Clydesdale Stallions.



Last importation just arrived Aug. 5. Imported more stock in 1898-99 to this country than all other importers together; and I also handle no second-hand horses from the United States, but buy direct from the Old Country, and nothing but the best the market can afford. I have them on hand from 3 to 5 years old, weighing 1,800 upwards. These horses must be sold, and at reasonable prices and terms, in order to make room for more. Write for description. Address:

EDWARD R. HOGATE CO., 10 Maitland Street, TORONTO, ONT. Barns: College and Dufferin Streets. -om

DALGETY BROS.,

GLENCOE, ONT.,

"Largest Importers . . . in Canada."



A large selection of imp.

CLYDESDALE

stallions and mares, also Hackneys, including several prizewinners in Scotland. Ages ranging from 2 yrs. to 6; weighing up to 2,400 lbs. No exorbitant prices asked. Small profits and quick returns.

FOR SALE . . .

IMPORTED AND CANADIAN-BRED

Clydesdale Stallions

From One to Four Years Old. Also



SEVERAL THREE YEAR OLD FILLIES,

All registered and warranted sound. Inspection invited.

ROBT. DAVIES,

Thorncliffe Stock Farm, TORONTO.

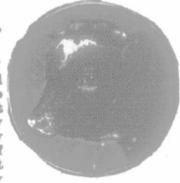
River Bow Stock Farm.

B. SNARY & SONS, CROTON, ONT.,

Breeders of

Shorthorn Cattle, Poland-China and Chester White Swine.

We offer for sale seven good young bulls, from seven to twelve months old; eight heifers of choice quality and breeding. Sired by Chief Captain. Pigs of both sexes and all ages at moderate prices, quality considered.



JOHN DRYDEN.

BROOKLIN, ONTARIO.

BREKEDER OF **Scotch Shorthorns,**

— AND — **Choice Shropshire Sheep.**

Scotch Shorthorns

FOR SALE.

100 head to select from; 23 grand young bulls by Valkyrie = 21806 =, and cows and heifers of all ages, of the most approved breeding, served by (imp.) Diamond Jubilee = 28861 =, now at the head of our herd.

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

BONNIE BURN STOCK FARM

Forty rods north of Stouffville Station, has for sale three excellent young Shorthorn Bulls, yearling and two-year-old Heifers in calf. Shropshire Lambs, both sexes; also Berkshires. At very moderate prices.

-om D. H. RUSSELL, Stouffville, Ont.

CANCER

CURED WITHOUT KNIFE OR PLASTER. FULL PARTICULARS FREE.

F. STOTT & JURY, Bowmanville, Ont.

HERE IS A LIST OF THE PRINCIPAL MANUFACTURES OF SPRATT'S PATENT, LIMITED:

Dog Cakes, Charcoal Dog Cakes, Greyhound Cakes, Plain Round Cakes, Oatmeal Cakes, Puppy Cakes, Pet Dog Cakes, Cod Liver Oil Cakes, Orphan Puppy Food, Pepsinated Puppy Meal, Plain Puppy Meal, Bone Meal for Puppies.

OF REMEDIES, ETC., THE FOLLOWING:

Dog Soap (white), Antiseptic Soap (black), Tonic Tablets, Mange Cure, Eczema Cure, Purgative Tablets, Cough Tablets, Vermifuge, Puppy Vermifuge, Cooling Tablets, Loculum, Liniment for Sprains, etc., Hair Stimulant, Jaundice Tablets, Cure for Canker, Fit Cure, Distemper Tablets, Anti-Rickets Tablets, Eye Lotion Tablets, Diarrhoea Cure.

Send for catalogue of dog and poultry foods and supplies of all kinds to **Spratt's Patent Ltd.**, 245 E. 56th St., N. Y. (San Francisco Branch, 1385 Valencia St.) Canadian Agents: F. Hughes & Co., Montreal; J. A. Simmers, Toronto; John S. Pearce, London; M. F. Eagar, Halifax, N.S.; Whitehead & Turner, Quebec; W. H. Gillard & Co., Hamilton, Ont.

DISPERSION SALE

Maplehurst Berkshires.

Owing to my leaving Canada, we offer for quick sale our herd, consisting of over forty head of Bacon-type Berkshires of various ages. Prices will be found right. Address, **J. J. FERGUSON**, Box 373, Smith's Falls, Ont., or Agr. College, Mich., U.S.

SPRINGHURST SHORTHORNS

The famous sire, Abbotsford -19446-, and the crack young show bull, (imp.) Knuckle Duster (72793), head the herd, which is largely of Cruickshank blood. Twelve good young bulls (some toppers), and a choice selection of females for sale. Address,

Exeter Station, G. T. R., **H. SMITH**, half mile from farm. HAY, ONT.

W. D. FLATT, HAMILTON P. O. and TELEGRAPH OFFICE,



OFFERS FOR SALE

7 Imported Bulls,
5 Canadian-bred Bulls,
30 Canadian-bred Cows and Heifers;

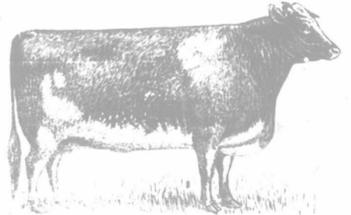
ALSO A NUMBER OF

IMPORTED COWS AND HEIFERS.

The noted imported bull, Golden Fame, is at the head of my herd. Prices consistent with quality. Correspondence and inspection invited. Visitors welcome. Catalogue on application.

ARTHUR JOHNSTON

Greenwood P. O. and Telegraph Office,



SHORTHORN BULLS

10 Imported Bulls,
10 Canadian-bred Bulls,
10 Yearling Shropshire Rams, 3 of them imp.
20 First-class Ram Lambs.

GOSSIP.

John Aikenhead, of Hartney, Man., has completed the erection of a fine stock barn, and he intends making a speciality of Ayrshire cattle, he having purchased some time ago from Joseph Yuill & Sons, of Carleton Place, Ont., a young bull and heifer of this special purpose dairy breed.

Mr. John S. Campbell, of Morris, Man., writes that he has decided to sell his improved farm, at Silver Plains, on the N. P. Ry. In connection with the farm is a cheese and butter factory, in first-class condition. An opportunity is here presented to anyone seeking property in this district. See advertisement in another column.

Mr. John S. Robson, Thorndale Stock Farm, Manitou, Man., in making a change in his advertisement in this issue, writes:—"I had a larger crop of calves this year than ever before—37 bull calves and about the same number of heifers. They are a good lot, strong-boned and well fleshed, mostly by Village Boy 12th -21409-. The young bull, Royal Judge, has grown to be a big, lusty fellow."

Elsewhere in this issue, Messrs. Smith & Burton change their advertisement, and submit to our readers quotations on the different brands of teas they handle. This firm have been doing a large country business in the West for years in groceries of all kinds, and have for the past two years paid much attention to the tea business. Anyone desiring to lay in their winter supply of tea should look over their advertisement. They also request the name and address of any person, and they will be pleased to forward a full grocery catalogue.

Mr. Duncan Sinclair, of Oakville, Manitoba, on the Portage branch of the N. P. R., advertises a credit auction sale of about 90 head of grade Shorthorn cattle, on Tuesday, November 14th. The cattle to be sold consists of cows, heifers and steers from pure-bred Shorthorn sires of high breeding quality, and this sale affords a splendid opportunity to any parties desiring to purchase some good grade stock as foundation for a herd. The sale will take place at 1.30 o'clock, p. m.

In order to encourage the dairy industry in a practical way, Premier Greenway offered a substantial money prize to the patrons of the Crystal City creamery who contributed during the season, the largest quantity of cream. At the end of the season, the results showed that John Follis sent in 1,333.6 inches of cream, from which was manufactured 1,418.3 pounds of butter, he winning the first prize of \$25.00. Mrs. Wm. Manning, 2nd prize of \$15.00, having contributed 1,181.5 inches of cream, producing 1,336.5 pounds of butter. Mrs. Thos. Hagyard, 3rd prize, \$10.00, on 1,014.3 inches of cream, from which was made 1,239.4 pounds of butter.

Report of Bureau of Animal Industry.—The fifteenth annual report of the U. S. Bureau of Animal Industry, for 1898, has just come to hand. A volume of over 600 pages, covering a wide range of subjects, among which are: Blackleg in the United States, by D. A. Norgaard; Breeds of dairy cattle, by Henry E. Alvord; Investigations concerning tuberculosis, glanders, swine plague, and hog cholera; Inspection of meat and milk, &c., by various expert authorities; Plants poisonous to stock, by V. K. Chestnut; Summaries of experiments carried on at Experimental Stations, &c., &c. The volume contains many illustrations.

John Miller & Sons,

BROUGHAM P. O. and TELEGRAPH OFFICE,

OFFER FOR SALE . . .

4 Imported Clydesdale Stallions.
10 Scotch-bred Shorthorn Bulls.
10 Yearling Shropshire Rams, 3 of them imp.
20 First-class Ram Lambs.

PRICES REASONABLE.

Claremont Stn., Pickering Stn.,
C.P.R. G.T.R.

Correspondence Invited.

SCOTCH SHORTHORN BULLS AND HEIFERS

HERD ESTABLISHED IN 1872.

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

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

SHORTHORN CATTLE AND LINCOLN SHEEP.

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

J. T. GIBSON,
DENFIELD, ONT.

Shorthorns and Shropshires.

I have a few promising young bulls on hand, and am booking orders for Shrop. ram lambs for fall delivery; well covered.

GEORGE RAIKES, - BARRIE, ONT.

HAWTHORN HERD OF DEEP-MILKING SHORTHORNS.

We are offering 5 young bulls for sale, of first-class quality, and AI breeding.

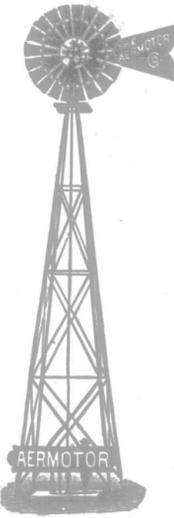
Wm. Grainger & Son, - London, Ont.

SHORTHORNS.

Bulls from 6 to 13 months old. One yearling 3 months old. Also cows and heifers.

E. R. McCallum & Sons,
IONA STATION, ONT.

Harness the Wind



AND MAKE IT GRIND YOUR GRAIN, OPERATE YOUR STRAW CUTTER, SAW YOUR WOOD, PUMP YOUR WATER, AND DO MANY OTHER BRANCHES OF WORK ABOUT THE FARM.

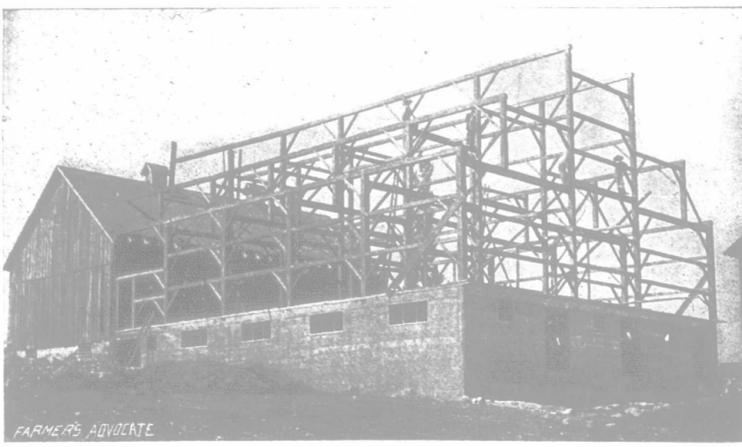
THE Chicago Aermotor Windmill

WILL DO ALL THIS FOR YOU AT A MINIMUM OF COST. ASK US FOR PRICES, OR INTERVIEW THE

Massey-Harris Agent IN YOUR LOCALITY.

Joseph Maw and Co., Market Square, WINNIPEG, MAN.

ANOTHER FINE WALL . . . Built with . . . Thorold Cement



Basement and Frame of Mr. J. A. James' Dairy Stock Barn, Nilestown, Ont. New portion, 72x60 feet. Walls, 12 feet high.

WHAT MR. JAMES SAYS ABOUT THOROLD CEMENT.

ESTATE OF JOHN BATTLE, THOROLD, ONTARIO: Nilestown, Ont., September 7th, 1899.
Dear Sirs, It is with pleasure that I testify to the good qualities of your Thorold Cement, having used it in building the concrete walls of my barn, size 72x60 feet. It turned out a splendid job, the walls being hard and dry, and I have no hesitation in recommending your Cement to those requiring its use.
J. A. JAMES.

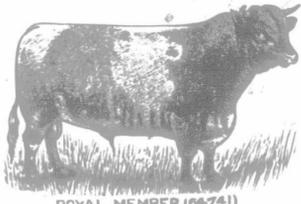
FOR FREE PAMPHLET WITH FULL PARTICULARS, ADDRESS ESTATE OF JOHN BATTLE, THOROLD, - ONTARIO.

PLEASE MENTION FARMER'S ADVOCATE.

10 Imported Shorthorn Bulls

ALL SCOTCH.

21 IMPORTED HEIFERS. ALL SCOTCH.



ROYAL MEMBER (69741)

21 IMPORTED HEIFERS. ALL SCOTCH.

Heifers all in calf to imported bulls. The oldest home-bred bull we have was calved in April last. Also a number of first-class home-bred animals of either sex. Correspondence or a personal visit solicited. Catalogues on application.

H. CARGILL & SON, CARGILL, ONT.
Cargill Station and Post Office on G. T. R., within half a mile of barns.

20 - Imported Scotch Shorthorns - 20

2 BULLS, 1 and 2 YEARS OLD; 14 HEIFERS, 2 YEARS OLD; 4 YEARLING HEIFERS.

THIS importation came out of quarantine on the 12th July, and representatives of many of the leading Scotch families are amongst them, including Minas, Brawith Buds, Secrets, Mysies, Beauties, Lady Mays, Lustres, etc. The home-bred herd contains Indian Statesman =23004=, and 15 young bulls from 6 to 18 months old, and 50 cows and heifers of all ages. Registered Shropshires, yearling rams and ewes, ram lambs from imp. Flashlight. Any of the above will be sold at reasonable prices. Correspondence or a personal visit solicited. Catalogues on application.

Burlington Junction Station and Telegraph Office, G. T. R., within half a mile of farm.
W. G. PETTIT & SON, FREEMAN, ONT.

SHORTHORNS

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

D. ALEXANDER, Brigiden, Ont.

SPRING GROVE STOCK FARM

Shorthorn Cattle and Lincoln Sheep. Herd prize and sweepstake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by Imported Blue Ribbon =17095= and the famous Money-tuffel Lad =20521=. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns.

T. E. ROBSON, Ilderton, Ont.

25-Shorthorn Bulls-25

From 6 to 18 months. Also a limited number of females, among which are grand, thick-fleshed and choicely bred animals, mostly solid red colors. Speak quick, for they will not last long.

G. A. BRODIE, BETHESDA, ONT.

Maple Lodge Stock Farm

ESTABLISHED 1854. SHORTHORNS.—A grand lot of young bulls, got by the great Caithness and Abbottsford. Choice heifers in calf to imp. Knuckle Duster and Abbottsford—milk strains. LEICESTERS.—A splendid lot of ram lambs, ewes and ewe lambs for sale. Our flock has won first prize for pen—1895, '96, '97, '98, '99—at Toronto and London. Write us for prices.

ALEX. W. SMITH, MAPLE LODGE P. O., ONT.

Oh, Yes! We sell Holstein Bulls. Sold 7 in May. Have 12 now on hand; oldest 9 months old; bred right and are right. Write for particulars. Male or female. State what you want. **A. & G. RICE, Currie's Crossing, Ont., Oxford County.**

MAPLE CLIFF Dairy and Stock Farm.

FOR SALE: 2 YEARLING BULLS, 7 BULL CALVES, 10 TAMWORTH BOARS. Fit for fall service. SEVERAL YOUNG SOWS, 40 FALL PIGS. A number of BERKSHIRES of good quality. **R. REID & CO., HINTONBURG, ONT.** Five minutes' walk from Cen. Expl. Farm, Ottawa.

HICKORY HILL AYRSHIRES.

A few choice dairy bulls for sale, or will exchange for first-class fresh milk cows, if taken at once. **N. DYMENT, Clappison's Corners, Ont. Hamilton Station.**

Trout Run Stock Farm.

To reduce stock, will sell, this month, choice bull calves, 2 months old, bred from 1st prize bull at Toronto, from \$15 to \$20 each; one bull calf, 10 months old, Morton bred, shown at 5 shows, won 5 1st prizes—a beauty, for \$35. Heifer calves, heifers, and cows, all ages, heavy milkers, cheap, considering quality, to quick buyers. One pair Embden geese, Light Brahmas, B. P. Rocks, Black Minorcas, all kinds of Cochins; all cheap, to reduce stock early. My stock won 101 prizes at 5 shows: 52 1sts, 33 2nds, 16 3rds, 3 diplomas, and a medal.

WM. THORN, NORFOLK CO., ONT. LYNEDOCH, ONT.

FOR SALE.

1 Three-year-old Ayrshire Bull; 4 Ayrshire Bulls, one year old; 3 Ayrshire Bulls, 8 months old; Bulls and Heifers under two months, and Cows of all ages; 8 Shropshire Ram Lambs, also Ewes; 1 Berkshire Boar, 1 year old; 2 Boars under one year, also Sows, pairs not akin. Plymouth Rock Hens and Chickens; a few fine Cockerels left.

J. YUILL & SONS, Props., Carleton Place.

Ingleside Herefords

First prize herd and medals for best bull and best female, Toronto, London, Ottawa. Send for prices and illustrated catalogue.

TAMWORTHS
One boar six months old, and choice sows two months to a year old.

H. D. SMITH, COMPTON, QUE.

Ayrshire Bull Calves of 1899

3 YET on hand, and more to come within the next month, from some of our best imported cows. Will sell at reasonable prices. Address: **ROBT. HUNTER, Manager to W. W. Ogilvie, LACHINE RAPIDS, QUE.**

CHOICE AYRSHIRE BULLS

Three calves, 5, 8 and 12 months old, also one 1 month old, from that fine cow, Daisy 1st of Auchenbrain (imp.), and all sired by Craigelea of Auchenbrain (imp.).

W. W. BALLANTYNE, Formerly Thos. Ballantyne & Son, Stratford, Ont. "NEIDPATH FARM" adjoins city, main line G.T.R.

SPRINGBANK FARM.

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

GLEN ROUGE JERSEYS.

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

Jersey Cattle

THAT WILL PUT **MONEY IN YOUR POCKET.**
Mrs. E. M. Jones,
Box 324. BROCKVILLE, ONT., CAN.

NOTICE.

Minnesota Horticultural Society, which organized in 1886, and having a membership in 1888 of 837, offers a \$1,000 premium for a seedling apple tree as hardy and prolific as the Duchess, with fruit equal to the Wealthy in size, quality and appearance, and that will keep as well as the Malinda. Those interested, and are desirous of further particulars, should address the Secretary, A. W. Latham, 207 Kasota Block, Minneapolis, Minn.

Yearbook.—The Statistical Yearbook of Canada for 1898, issued by the Department of Agriculture, is worthy of more attention by Canadian citizens than is usually given such works. Its twelve pages of brief history are in themselves valuable and interesting. The physical features, constitution and government, treaties, lands and land regulations, events of the year, etc., occupy some 68 pages, while the remaining 550 pages are filled with cold, but interesting, facts that every Canadian should have access to. The compilation has been ably executed by Mr. George Johnston, F. S. S., assisted by Messrs. J. Wilkins and J. Skead.

F. W. STONE ESTATE, GUELPH, ONTARIO.

The first Hereford herd established in Canada by importations in 1859 of the best prizewinners of England, followed by repeated further importations, including winners of first prize at Royal Agricultural Show. Choice young Hereford Bulls for sale. Also McDougall's Sheep Dip and Cattle Wash, fresh imported, non-poisonous and reliable; thoroughly tested by over forty years' use on farms of above estate.

BRAMPTON JERSEY HERD.

Offering high-class A. J. C. C. cows and heifers in calf, and heifer calves; 9 choice young bulls; High-grade cows in calf; and Berkshires. **B. H. Bull & Son, BRAMPTON.**

MAPLE CITY JERSEYS.

FOUR JERSEY BULL CALVES FOR SALE. All descended from the best St. Lambert blood; age, from 9 to 11 months old; bred from very choice prize-winning stock. Herd took first prize the last three years wherever shown. Prices right. **W. W. EVERITT, Box 552, Chatham, Ont.**

Maple Glen Stock Farm.

A bull calf, born Aug., '99; dam Juanita Sylvia, winner of 2nd in milk test, Ottawa Exhibition, and member of sweepstake herd, Toronto, 1899. Also one from a daughter of Inka Sylvia, the great cow in the official tests. She won 2nd in Toronto test and later 1st in Ottawa test. These calves are sired by a Gem Pieterje Hengerveld Paul DeKol bull. For particulars, address: **C. J. GILROY, Glen Buell, Ont. Brockville, on C. P. R. or G. T. R.**

The Big 4 at Brookside

THEIR HOLSTEINS:
Netherland Hengerveld..... Official test, 26.66 lbs.
DeKol 2nd..... " " 26.57 "
Belle Korndyke..... " " 25.77 "
Helena Burke..... " " 25.45 "

We want to sell 10 cows and heifers, and 20 young bulls, bred in the lines above mentioned. Write, stating exactly what you want. **Henry Stevens & Sons, Lacona, N. Y.**

EUROPEAN ADVERTISEMENTS.

Hampshire Down Sheep.

SPLENDID MUTTON. GOOD WOOL. GREAT WEIGHT. This highly valuable English breed of sheep is unrivalled in its Rapid and Wonderfully Early Maturity, possessing, too, a hardiness of constitution adapted to all climates, whilst in the quality of MUTTON AND LARGE PROPORTION OF LEAN MEAT IT IS UNSURPASSED.

Full information of **JAMES E. RAWLENCE,** Secretary, Hampshire Down Sheep Breeders' Association, SALISBURY, ENGLAND.

W. W. Chapman,

Secretary of the National Sheep Breeders' Association, Secretary of the Kent or Romney Marsh Sheep Breeders' Association, and late Secretary of the Southdown Sheep Society. Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered stock personally selected and exported on commission; quotations given, and all enquiries answered. Address: **FITZALAN HOUSE, ARUNDEL ST., STRAND, LONDON W. W. Cables—Sheepcote, London.**

Horse Owners! Use



GOMBAULT'S Caustic Balsam
A Safe Specific and Positive Cure
The Safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce scum or bluish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. **THE LAWRENCE-WILLIAMS CO. TORONTO, CAN.**

Southdown Sheep For Sale

Huntlywood Farm, BEACONSFIELD. Ewes and rams from this flock imported and home-bred animals from the celebrated flocks of His Royal Highness the Prince of Wales, Sandringham, England; His Grace the Duke of Richmond and Gordon, Goodwood, England; J. J. Coleman, of Norwich, Eng. Apply at the farm, Beaconsfield, near Montreal, Province of Quebec, or by letter to Box 2292, Montreal, P. Q., Canada.

Oxford Down Sheep

Flock Established in 1881. Have for sale 120 registered ram lambs, and 50 ewes of different ages. Singly or in car lots. Prices reasonable. **HENRY ARKELL, ARKELL P. O., ONT. Guelph: Telegraph and Telephone.**

BRANT STOCK FARM Oxford Downs.

Two imported rams (first and second prize winners at Toronto, 1898) at head of flock of selected breeding ewes. Choice young stock for sale. Come and see our stock. **J. H. JULL & SONS, BREEDERS AND IMPORTERS, Burford Station, Mt. Vernon P. O., Ont.**

6 CHOICE REG. LEICESTER RAMS 6

Strong, even, well-covered sheep, especially selected from flock of 1898. Also ram and ewe lambs. Wanted, a Farm Hand (single) to take care of stock, etc. **E. GAUNT & SON, LUCKNOW, ONT.**

Fairview Shropshires.

5 imported shearing rams; 10 imported shearing ewes; 10 Canadian-bred shearing rams; 16 Canadian-bred ewes. For sale at good value to purchasers. **JOHN CAMPBELL, Woodville, Ont.**

Shropshire Rams and Ewes

Newly imported from the greatest English breeders. Home-bred rams and ewes of best quality. Scotch Shorthorns and Clydesdale horses for sale at moderate prices, and in large numbers, by **ROBERT MILLER, STOUFFVILLE, ONT.**

WHAT I OFFER NOW IS:

15 SHROPSHIRE EWES, To be delivered after service by imp. rams.
30 Young YORKSHIRE PIGS
5 JERSEY FEMALES,
1 SHORTHORN BULL 18 months old.
RICHARD GIBSON, DELAWARE, ONT.

OAK LODGE HERD OF Large Yorkshires.



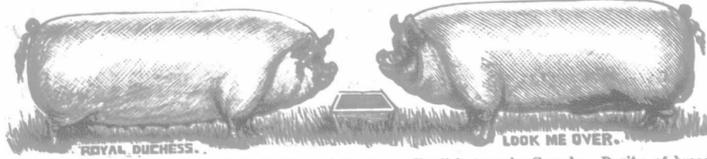
The oldest established and largest in America. Look up the record of this herd at the larger exhibitions—more prizes won than all others combined, sweepstakes over all breeds in class for bacon hogs two years in succession; winner of championship and gold medal at the Royal; also several prizewinning boars and sows personally selected from noted English herds. Oak Lodge Conqueror and Oak Lodge Challenge, two of the best boars in Canada, are in the herd. Stock from these boars are winners. Improve the quality of your pigs by securing some of the Oak Lodge blood.

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HEADQUARTERS FOR THE IDEAL BACON HOG.



The largest herd of pedigreed Yorkshires of the large English type in Canada. Purity of breed size, and general excellence is my motto. One hundred awards with one hundred and five exhibits at 7 shows in 1898. A choice selection of young boars and sows of all ages for sale; also boars fit for service, and pregnant sows. Fifty breeding sows, of which 25 (twenty-five) are imported; also three imported stock boars bred by such noted breeders as Sanders Spencer and Philo L. Mills. Am also using two Canadian-bred stock boars, first prize at Toronto in 1898-99. Express charges prepaid. All stock carefully shipped and guaranteed as described. Telephone, Millgrove, Ont. Telegraph 254 Bay St. S. Hamilton, Ont. om

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SHROPSHIRE

SEVENTEEN SHEARLING RAMS.
Also our two-shear stock ram, from John Miller & Son's flock, with twelve ram lambs. Have for sale two Shorthorn Bulls, one fourteen months and one five months. Prices moderate.
om **PUGH BROS., Whitevale P. O.**

PINE GROVE FARM HERD OF LARGE YORKSHIRES.

Imported and Canadian-bred, from the Hasket family, which has taken more prizes at the leading fairs in Canada and the World's Fair at Chicago than any other family of Yorkshires in America. Young boars and sows fit for breeding for sale. Correspondence solicited, which will receive prompt attention.
JOSEPH FEATHERSTON, Streetsville, Ont.
om

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In Want of the following first-class registered stock, viz.:

Chester White boars fit for service, Shropshire ram or ewe lambs, or Dorset sheep, either sex, write for prices, etc., to

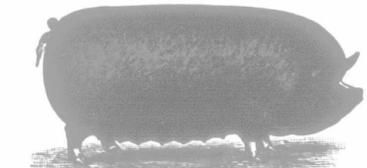
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We can supply singly, in pairs, or trios, not akin, or in larger numbers, registered Berkshire pigs and Cotswold sheep of the highest class. Young boars fit for service, sows old enough to breed. Young pigs 6 to 8 weeks old. Ram lambs and ewe lambs. Write for prices and particulars.
SNELL & LYONS,
om **SNELGROVE, ONT.**

I am offering for the month of October a grand lot of Imp. YORKSHIRE BOARS ready for service. Sows ready to breed, and fall pigs not akin.
Also LARGE ENGLISH BERKSHIRES and five choice SHORTHORN BULLS of the best breeding.
om **H. J. DAVIS, BOX 290, WOODSTOCK, ONT.**

LARGE ENGLISH BERKSHIRES.



Herd headed by five first-prize boars of large size and fine quality. Twenty-five young sows and ten boars for sale, bred from prizewinners. Pairs supplied not akin.

GEORGE GREEN, - FAIRVIEW P. O., ONT.
om Telephone and Station: Stratford, G. T. R.

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The home winners of the
Headed by the imported boars, Conrad's Model and Klondike, assisted by Bacon Boy and Lennox. Has won 64 out of a possible 69 first prizes. Stock of all ages for sale. Write for prices or come and see
W. & H. JONES,
OXFORD, ONT. om **MT. ELGIN, ONT.**

IMPROVED JERSEY SWINE

First-class Jersey Swine of all ages, either sex, for sale.
om **TAKEN**

GOSSIP.

One of R. A. Lister & Co.'s new Alexandra steam turbine driven cream separators has been working at the Government Experimental Farm dairy at Ottawa. It has given so much satisfaction that the Department have decided to purchase same.

On Saturday, the 14th of October, Messrs. Alfred Mansell & Co., live stock exporters, Shrewsbury, Eng., shipped per the SS, "Brittany," from Liverpool to Argentine, the fine 3-year-old Clydesdale stallion, Horatius 10357, the Glenkens premium horse of last season. Horatius was bred by Mr. John McMeekan, Knockneen, and got by the celebrated Macgregor 1487, out of Susie III, of Knockneen, by Prince of Wales 673.

Let every old subscriber to the FARMER'S ADVOCATE secure at least one new subscriber for next year, and have his own subscription advanced one year or secure one of our valuable premiums. See our premium list in this issue. New subscribers get benefit of balance of this year free, including the elegant Xmas number, valued at 50 cents for single copy.

N. Dymont, Clappison, Ont., breeder of Ayrshire cattle, writes:—"As the shows are over, I report my stock doing well; the cows are milking well in spite of the dry summer. The young things are doing well, and will be in good shape for the winter. Have had good success at the fairs this fall, having won fifty-five prizes, thirty firsts, sixteen seconds, eight thirds, and one fourth. Among the prizes won are diplomas for bull, female any age, four firsts for best dairy cow any age or breed, two being silver medals. Have some good dairy bulls for sale at reasonable prices, or will exchange for fresh milk cows, if taken at once.

BORDER LEICESTER SALES.

At the Aberdeen Border Leicester Club show and sale, the last week in September, Mr. Robert Taylor, Pitlivi, carried off the first three prizes for shearing rams, and his 22 shearing rams made an average of £6 11s. 1d., the highest price of the lot and of the sale being £13 10s. The next highest price was £8, made by one of Mr. Hume's, Barrowwell.

Messrs. H. Cargill & Son, Cargill, Ont., in ordering a change in their advertisement of Shorthorns, offer 10 imported bulls and 21 imported heifers, all Scotch-bred, as well as a number of home-bred ones of Scotch families. They add: "Our new importation of 50 Shorthorns arrived from quarantine October 21st, all well and in good shape, considering the long trip on the cars. The 10 bulls are a choice lot; all big, lusty fellows, of choice breeding and quality. The heifers are all in calf but two, and are a grand, even lot, of good size and best breeding procurable."

Capt. T. E. Robson, Ilderton, Ont., has added another good one to his herd of Shorthorns by the purchase, from Mr. Wm. McIntosh, of the red yearling heifer, Lady Fanny 8th by Golden Count = 2640 =, dam Lady 7th by Lord Lovell's Heir = 20337 =, grandam Lady Fanny (imp.) = 18388 =, bred by Mr. Bruce, Foochabers, and got by Earl of Moray (43171), a first-prize winner at the Royal Northern at Aberdeen. The dam of Lady Fanny was by Knickerbocker, winner of ten first prizes, seven cups, and two medals, including the gold medal at the Highland Show at Sterling. Capt. Robson has recently sold to Mr. Joseph Lawrence, Clearwater, Manitoba, the grand two-year-old bull, George Bruce, by Robert the Bruce, winner of first prize in his class at the Toronto Exhibition, 1896.

Nail This in Your Memory . .

Windsor Salt gives to butter that delicious sweetness and freshness which brings the high price. Perfectly pure; natural crystals.

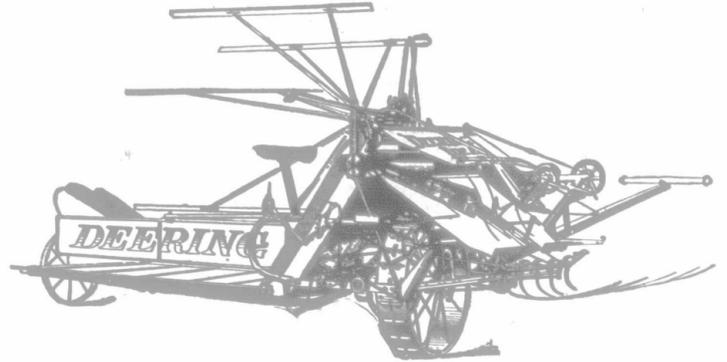
TRY IT!
THE WINDSOR SALT CO.,
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REGISTERED CHESTER WHITE PIGS.
Six weeks old, at \$5.00 each. Prizewinning and Jersey bull calves. Prices reasonable.
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MACHINES

That Made America FAMOUS.



DEERING LIGHT DRAFT IDEALS

Are made in the Largest Factory in America.
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It will pay you to investigate the merits of Deering Machines.

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Subscribers



Twelve
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Subscribers

TO ANY SUBSCRIBER sending us the names of 12 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. (See page 36, January 20th issue.)

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.

HOW TO OBTAIN IT—

Would retail at from \$3 to \$4. We will send (carefully packed, post prepaid) this Bible to anyone sending us the names of TWO NEW SUBSCRIBERS to the FARMER'S ADVOCATE at \$1.00 each.

Our Self-Binder, HANDY, DURABLE and ATTRACTIVE.

Made to contain the 24 issues of the year. We will forward this Binder, post-paid, to anyone sending us the names of two new subscribers and \$2.00.

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Our system of teaching by mail will give any boy a technical education. Write for pamphlet and state what you wish to study.

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WILL CUT FEED, CHOP, PULP AND PUMP WATER

For the House, For the Barns, For Pastures.

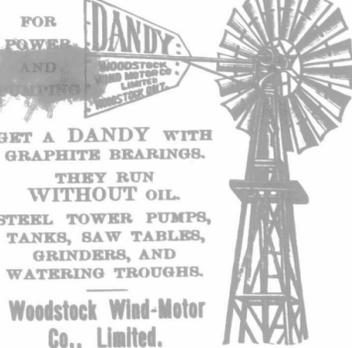
WILL PAY FOR ITSELF IN A SHORT TIME.

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FOR POWER AND LIGHTING

GET A DANDY WITH GRAPHITE BEARINGS. THEY RUN WITHOUT OIL. STEEL TOWER PUMPS, TANKS, SAW TABLES, GRINDERS, AND WATERING TROUGH.

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COCKSHUTT PLOW CO. (Limited), Agents for Manitoba and NWT, Winnipeg.

PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

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

Mr. Arthur Johnston, of Greenwood, Ont., changes his advertisement in this issue, and informs this office that the Greenwood herd was never in better breeding form than at present. The young things, especially the yearlings, are a splendid lot, and though not in high flesh, they are looking exceedingly well. There are twenty-one yearlings, eight of which are imported, and four out of imported cows, and sired by imported bulls. The young bulls are an equally nice lot, but they are leaner than usual. The recently imported lot are still in quarantine. They are expected home or, or about December 1st.

SOME GOOD PRICES FOR SHORTHORNS.

The auction sale of Shorthorns, made by Forbes Bros., at Henry, Ill., October 11th, was eminently successful. Included in the sale were a number of Scotch-bred animals, imported last year by Mr. I. M. Forbes, ten females of which averaged \$653, and the Scotch-bred bulls averaged \$507. The highest price of the sale, \$1,000, was made by the imported 2-year-old bull, Fairhaven, which fell to the bid of Benjamin Whitsitt & Sons, Pre-emption, Ill., and the highest price for a female, \$850, was paid by J. F. Prather, Williamsville, Ill., for Golden Venus, a red 5-year-old cow. The same buyer secured the next highest priced cow, imp. Rosemary 201st, a roan 2-year-old heifer, at \$825. Thirty-nine females sold for an average of \$295.50; eleven bulls for an average of \$306.35, and the average for the 50 head sold was \$298.

PIERRERMILL AND NEWTON SHORTHORN SALES.

At the joint sale of Shorthorn cattle, property of Mr. A. M. Gordon, Newton, held at Newton, October 12th, good prices were obtained, 42 head of Mr. Wilson's averaging £28 13s. 9d., and 14 head of Mr. Gordon's averaging £66 19s. 6d. The average for the 56 head sold was £38 5s. The highest price for a female was made by Mr. Gordon's yearling heifer, Cornelia, by Corner Stone, which went to Mr. P. L. Mills at 115 guineas. The same buyer secured the highest-priced bull from the same herd, in Magic Stone, by Corner Stone, at 200 guineas, and Brilliant Star, by the same sire, at 180 guineas. Mr. Dudding bought the bull, Lucky Pride, of Mr. Wilson's herd, by Sittytou Pride, at 81 guineas, and Mr. Atkinson took Chief of the Clan at the same price, the highest made by the Pierremill offering. On October 13th, Mr. McWilliams, Keith, sold 52 head at an average of £43 3s. 10d., one cow making 102 guineas, a 2-year-old heifer 80 guineas, and a bull calf, by Pride of Fame, 80 guineas.

HORSE SHOW AT MADISON SQUARE GARDENS.

The fifteenth annual horse show, which will be held at Madison Square, New York, on November 13th to 18th, will undoubtedly prove a brilliant affair. A prize list of \$30,000 in premiums is in itself attractive, and no expense is being spared to complete the preparation for the notable event. A number of changes are made in the classifications, such as setting apart separate classes for dealers' competitions, and barring their entries showing in the open classes. For years pressure has been brought to bear to bar out first-prize winners, so that second-class horses might have an opportunity to win. The change has been made, and this year horses that have previously won a first prize at this show will not be eligible to compete in the same class again, but may show in the championships. The previous first prize horses may be shown in other classes, if they can be made eligible in other respects, and the new rule does not apply to classes in which championships are not provided. A qualification of the new rule is that stallions that have won with their progeny may again be exhibited with another set of colts. We notice that the judges for Hackneys are Dr. Andrew Smith, Toronto; R. P. Sterriker, Janesville, Wis.; and Robt. Graham, of Agram Bros., Claremont, Ont.

THE COLLYNIE AND UPPERMILL SALE OF SHORTHORNS.

At the annual joint sale of Shorthorns, the property of Messrs. Duthie and Marr, the highest price for a bull calf was 305 guineas. Two others sold for 300 guineas each, and Messrs. Cargill & Son, Cargill, Ont., secured Golden Drop Victor at 290 guineas. He is a red bull, calved December 26th, 1888, and was sired by Nonpareil Victor, dam Golden Drop 11th, by Emancipator. The average worked out as follows:—

Mr. Duthie's, of Collynie.		Average.
30 Bull calves	£123 18 0	4 0
5 Cows	60 5 4	12 0
1 Two-year-old heifer	52 10 0	52 10 0
2 Yearling heifers	74 0 6	37 0 3
10 Heifer calves	43 9 4	43 9 4
38 Head	£ 89 17 2	23 2 2
Mr. Marr's, of Uppermill.		Average.
16 Bull calves	£116 18 10	7 2 10
8 Cows	49 13 9	61 13 9
3 Two-year-old heifers	26 5 0	26 5 0
3 Yearling heifers	31 6 0	31 6 0
30 Head	£ 79 5 6	26 18 4

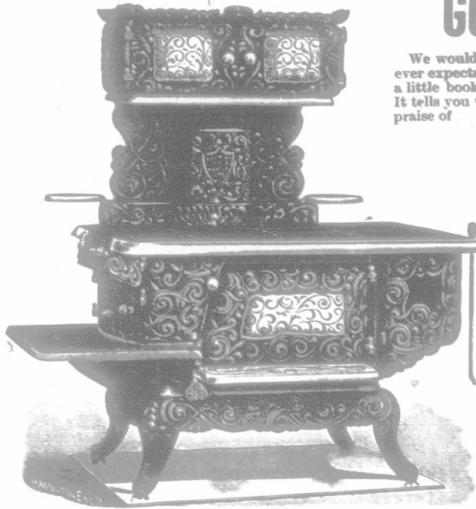
These figures bear very favorable comparison with those realized at the corresponding sale last year, when Mr. Duthie's draft of 24 bull calves averaged £30 9s. each, and Mr. Marr's draft of 19 made over £76 each. The top price on that occasion was, however, better than that of this year by 25 guineas, one of Mr. Marr's calves then making 330 guineas.

Sires of Bull Calves.

The following table shows the average prices of the bull calves got by the principal sires used in both herds:—

Spicy Robin (8)	£ 78 12 4
Spicy Monarch (5)	53 11 0
Ringleader (1)	105 0 0
Wanderer (6)	101 6 6
Royal Leader (1)	50 8 0
Golden Victor (1)	23 0 0
Pride of Morning (2)	317 12 6
Lord of Fame (6)	204 10 9
Nonpareil Victor (2)	172 4 0
Count Arthur (2)	81 18 0
Golden Fame (2)	61 19 0
Centaur (1)	168 0 0

"BY VIRTUE and BY WORD."



Good Words

We would like everybody who has a range or ever expects to have one, to be in possession of a little booklet entitled "It Has Never Failed." It tells you what just 159 people have to say in praise of

The ABERDEEN

(FOR COAL AND WOOD),

The VICTORIAN

(FOR WOOD ONLY).

It emphasizes the strong points in an honest and concise way—the unsolicited testimony of people who have tested the merits of these excellent ranges. Drop a card for a copy.

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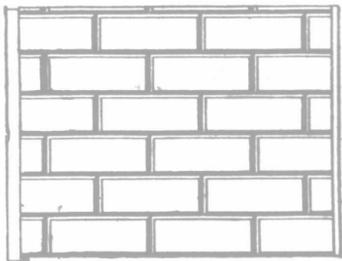
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WILL PRESENT a splendid appearance, and be economically protected from all kinds of weather. The sheets can be very easily and quickly laid by any handy man; are absolutely lightning as well as fire proof; and make a durable covering highly valued all over the country.

If you're doing any "fixing up" this fall, write us for full particulars.

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DES MOINES INCUBATOR CO

The BEST and the CHEAPEST.

95 Per Cent. Hatches are often reported by those who use these incubators. One reason for this record is absolute uniformity of temperature in egg chamber; correct instructions for operating; has fireproof lamp. A great mistake it would be to purchase an Incubator or Brooder without first getting a copy of our 148-page catalogue. Send 3 cents for illustrated catalogue of Incubator, Brooder, Poultry and Poultry Supplies.

"THE POULTRYER'S GUIDE" (new edition) 15 cents by mail.

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MILK FEVER CURE.

It is now KNOWN that the udder is the seat of milk fever. Schmidt's udder injections CURED 90 per cent. of the first 412 cases treated. TREATMENT for 1 severe or 2 mild cases, with instrument (specially designed for the purpose) and full printed instructions by mail, \$3.00. Extra bottle for 1 severe or 2 mild cases, \$1. Extremely simple. No drenching.

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To make it Pay Your stock well watered. Economy in time and labor. You must Have Increased flow of milk.

You get it with the Woodward Basins.

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SAWS ANY WOOD ON ANY GROUND

1 MAN with a FOLDING SAWING MACHINE BEATS 2 MEN with a Cross-cut Saw 6 to 9 cords daily is the usual average for one man.



Our 1900 Model Machine saws faster, runs easier and will last longer than ever. Adjusted in a minute to suit a 12-year-old boy or the strongest man. Send for catalogue showing latest IMPROVEMENTS. First order gets agency. Manufactured in Canada. NO DUTY TO PAY. Folding Sawing Mach. Co. 55 N. Jefferson St. Y 71, Chicago

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BALTIMORE, MD. Dept. 227.

Persianic Sheep Dip and Animal Wash.

A NON-POISONOUS LIQUID "DIP."
Kills Ticks. Kills Red Lice. Heals Wounds.
Greatly Improves quality of WOOL.
For Horses, Cattle, and Pigs.
Removes all insects. Thoroughly cleanses the skin.
Leading "STOCKMEN" endorse it as the CHEAPEST and most EFFECTIVE "Dip" on the market.
SOLD BY ALL DRUGGISTS, 50 cents PER QT. CAN.
Special rates in larger quantities.
MADE ONLY BY
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LIMITED,
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25 1/3% increase on our last year's attendance. A maximum daily roll-call of 216. That's where the tide of competency has carried into this year, and it means the largest business school in Canada to-day.
The demand for the competent bookkeeper, stenographer or telegrapher is steadily on the increase. We know it—our experience proves it. That demand will be greater than ever in 1900. Will you join us now and be able to do something then? A line to us will secure you more information. Send for it.
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For our new Catalogue if you want "the best" business education. Enter now.
om W. J. ELLIOTT, Principal.

HANDY STOCK LABELS \$2 PER HUNDRED AND UP
according to the number of letters and figures required. Also handy punch and nippers to insert the same. The better support we get the cheaper we can make them. Send for circular and price list.
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SHEEP BREEDERS' ASSOCIATIONS.
American Shropshire Register, 1899, is the largest live stock organization in the world. Hon. John Dryden, President, Toronto, Canada. Address correspondence to MORTIMER CLARKSON, Secretary, Lafayette, Indiana.

GOSSIP.

Old subscribers who find the ADVOCATE helpful and satisfactory are urged to secure new subscribers at once, and have their own subscription advanced one year or obtain one of our liberal premiums, a list of which will be found in this issue.

Snell & Lyons, Snelgrove, Ont., make a change in their advertisement of Berkshires and Cotswolds in this issue. Their Berkshires made a good record in the prize list at the last Toronto Exhibition, and are the right sort, measuring up to the demand of the times. They are also strong in Cotswold ram lambs and owe lambs. Write them for prices.

At the Birmingham show and sale of Short-horn bulls, the highest price was paid by Mr. Dudding, who bought the first prize yearling, Fisherman, a roan, exhibited by Mr. G. Freeman, at 87 guineas. The second prize bull sold for 40 guineas, and the third prize winner for 61 guineas. Mr. Dudding paid 85 guineas for a roan 2-year-old bull entered by Mr. W. S. Carless, Worcester.

On Thursday last, the 19th inst., Messrs. Alfred Mansell & Co., live stock exporters, Shrewsbury, shipped from the port of London, per SS. "Star of Victoria," a valuable consignment of high-class Shropshire rams and ewes, on account of Mr. R. G. Wilson, of Melbourne, Australia, selected from the flocks of Mr. Butler, Mr. P. L. Mills, Mr. R. P. Cooper, and Mr. A. E. Mansell.

HACKNEYS FOR CANADA.

Mr. Robert Beith, M. P., Bowmanville, Ont., has recently purchased from Mr. F. C. Stevens, Attica, N. Y., the 4-year-old Hackney stallion, Ganymede 2nd, by the champion Ganymede, and out of Modiste, of Fireaway blood. He is said to be a horse of superior style and action, and full of quality. Mr. Beith has also secured from the same stud the brown 4-year-old stallion, Maplewood Chief, which he himself bred from the World's Fair champions, Jubilee Chief and Winifred, by Wildfire. He is a big-framed, powerfully-muscled horse, and should do good work in producing the class of horses required by the trade.

Mr. Edward C. Atwill, Goderich, Ont., has purchased from Mr. Stevens the 2-year-old stallion, Langton's Danegelt, by Langton Performer and out of Lady Danegelt.

THE NICHOLSON TRIO OF SHORTHORNS.

In the group of young Shorthorns, illustrated on another page of this issue, owned by Messrs. R. and S. Nicholson, Sylvan, Ont., the bull is the "Marr Missie" yearling Royal Standard, winner of first prize in a very strong class of bull calves at Toronto and London, 1898, and first at Ottawa in 1899, beating the first prize yearling at Toronto. He is a son of Judge by imp. Royal Sailor, winner of first prize at Toronto as a yearling, and the championship at Winnipeg as a 2-year-old. The yearling heifers in the illustration are imp. Pineapple 12th and imp. Estelle 3rd, both roans, sired by Challenger (70122), the former out of Pineapple 7th, by Lord Ythan, the latter out of Evening Star, by the same sire. They are models of symmetry, early maturity and wealth of flesh, and would grace any herd in the land.

A SUCCESSFUL SALE OF CLYDESDALES.

At the public sale of Col. Robert Holloway's Durham Lawn Stud of Clydesdales, at Alexis, Ill., October 17th, thirteen entire horses averaged \$675, and the average on forty-nine, young and old, of both sexes, was \$500. Seven mares and fillies were purchased by the agent of Messrs. A. and W. Montgomery, Castle Douglas, Scotland, at prices ranging from \$300 to \$610. Mr. Robert Davies, Toronto, secured the 4-year-old mare, Lady Tarbreoch Cedric, by Cedric, at \$125; the 5-year-old mare, Queen Esther, by Prince of Quality, at \$350; and the 5-year-old Princess Maud, by the same sire, at \$600. D & O. Sorby, Guelph, bought Prince Delectable, a two-year-old bay stallion, by Cedric, at \$950, the highest price for a stallion. The highest price for a mare was \$1,000, paid by C. E. Clark, St. Cloud, Minn., for Cherry Macara, by Macara.

THE GREAT HEREFORD SHOW AND SALE.

Telegraphic despatches from Kansas City, Mo., announce a very auspicious opening of the great show and sale of Hereford cattle in that city, October 24th, the prizes, which were very liberal, being well distributed among a number of exhibitors, the bulk of the best premiums going to F. A. Nave, Attica, Ind.; T. F. B. Sotham, Chillicothe, Mo.; Gudgell & Simpson, Independence, Mo.; and Tom Clark, Beecher, Ill.

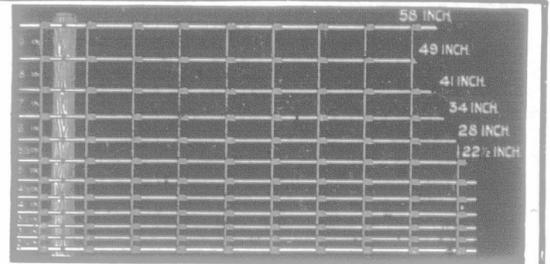
For the best pair, one male and one female, any age, the first prize went to Nave for the 3-year-old bull, Dale, and the 3-year-old Dolly V; Sotham winning second with Thickett and Benison, both 3-year-olds.

For cow and her produce, Gudgell & Simpson were first, with Mischievous and her calf, Mischiefmaker, weighing 645 lbs. at 8 months. Tom Clark had the first heifer calf under 6 months, in Peerless Missie. The top price for a bull in the first day's sale was \$760, paid by George Leigh, Aurora, Ill., for imported De-fiance, calved February, 1896. He was entered for sale by John Sparks, of Reno, Nev. On the second day of the sale, Mr. Sparks bought the yearling heifer, Armour Rose, at \$2,500, George Leigh bidding up to \$2,360, and Marshall Field, Chicago, to \$2,250.

ABERDEEN-ANGUS SALES.

At a joint sale of Aberdeen-Angus cattle, held at Perth, Scotland, the last week in September, 32 head were sold at an average of £19 2s., the highest price being £28. The sale of a choice selection from the famous herd of Mr. Clement Stephenson, Newcastle-on-Tyne, was held the same week, at which 30 head averaged £11 3s. 2d. The highest price of the day was 150 guineas, paid by Mr. Grubb, Tasmania, for the stock bull, Best Man of Benton. The highest priced female was the four-year-old, Pride of Albion II., which brought 55 guineas. The average for 40 females was £12 2s. A yearling bull brought 40 guineas, and a bull calf 43 guineas. An average of £10 10s. for 19 head, was made the following week at Castleberg, where the dispersion sale of the herd of Sir Thomas Gibson-Guthrie was held, the highest price being £12 2s. for a cow, Euphasia II.

Stays Up

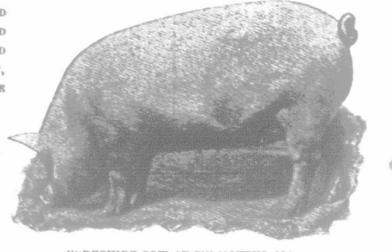


THAT IS THE STRONG CHARACTERISTIC OF THE AMERICAN FIELD AND HOG FENCE.

Once well stretched it stays in place and holds its shape. Cannot be broken by animals, or by expansion and contraction. Cannot rust, because of the heavy galvanizing. Made entirely of large wires. Sold by our agents everywhere. If you can't find an agent in your town write to
AMERICAN STEEL & WIRE CO., Chicago or New York.

Hurrah, Breeders, Hurrah!

WE HAVE AGAIN PROVED OUR CLAIMS. WE CAPTURED DIPLOMA AT THE TORONTO EXPOSITION AND LONDON FAIR, 1899. WE HAVE THE BEST AND CHEAPEST COOKER AND TANK HEATER IN THE MARKET, AND SELL THEM UNDER A GUARANTEE TO DO ALL WE CLAIM OR MONEY REFUNDED.



YORKSHIRE SOW AT SIX MONTHS OLD.

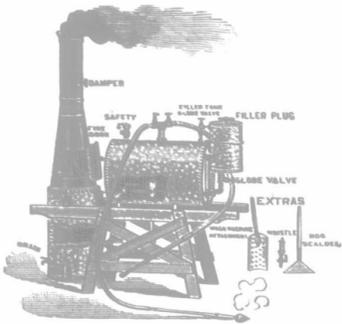
We Pay Duty and Freight.

COOK OR STEAM YOUR STOCK'S FEED AND SAVE 1/3 TO 1/2 YOUR FEED. YOU WILL SAVE THE PRICE OF OUR COOKER ON A DROVE OF THIRTY HOGS OR TEN HEAD OF CATTLE.

Winner of First Prize—Toronto Industrial, Western Fair (London), and Provincial Winter Show (Brantford), 1898, in class under 9 months. Bred and owned by J. E. Brethour.

SPECIAL FEED COOKER BARGAIN

In order to introduce at least one of our Cookers into every locality, we are making a special low price on the IMPROVED RELIABLE FEED COOKER, TANK HEATER AND STEAM GENERATOR for October. Cooks a barrel of ground feed in 30 minutes, 25 bushels of ground corn in two hours, or heats a barrel of water hot enough to scald hogs in 30 minutes. Note what experienced users say of it:



Breeder Polled Durham cattle, Waterman, Ill., Ripple Hardware Co., Grafton, Ill.: (March 20, '99. Gentlemen,—After using your Cooker for over a year I can say that it is all right, and will do all you claim for it. I use it every day to warm milk for the calves, and heat water to wash cans and pails in, and by turning the steam in them they are thoroughly cleaned. Can boil water in a few minutes to scald hogs in. I cook feed and warm water for the hogs at a distance of 50 feet from cooker. I use 3-inch gas-pipe to carry the steam where I want it. My cooker takes the place of two tank heaters, as I heat the water in two stock tanks with it; one of them is 130 feet from cooker, and it works all right, and did when the thermometer stood 22 degrees below zero. I am well pleased with the Cooker, and do not see how I could get along without it. S. M. HENDERSON, Oak Lodge Stock Farm. J. E. Brethour, Importer and Breeder of Improved Large White Yorkshire Hogs, Ripple Hardware Co., Grafton, Ill.

The largest herd of this celebrated breed in America. Burford, Ont., Canada, Feb. 4, 1899. Your letter of inquiry received regarding Feed Cooker. In reply would say it is all right; first-class in every particular. I would not be without it. I think every farmer that feeds stock should have one. I have cooked wheat for 150 head of cattle and 10 horses for the last two months. I am well pleased with it. Your Cooker has my best wishes for its success. Yours truly, JOHN WALLACE, BREEDER LARGE YORKSHIRE HOGS. Woodstock, Ont., Oct. 12th, 1899. The feed cooker purchased from you is giving the best of satisfaction, and I believe it will be a great benefit to feeders, as by its use it solves the question of cheap pork production, and greatly improves the feed at very little expense. Yours truly, H. J. DAVIS. We have hundreds of others just as good as these. It is sold only under a positive guarantee. Write for 1899 new catalogue and special prices.

RIPPLE HARDWARE COMPANY, Box 100, Grafton, Ill. U. S. A.

METAL EAR LABELS
Used by all Live Stock Record Associations.
Sheep size, per 100.....\$1.50
Hog size, per 100..... 1.50
Cattle size, per 100..... 2.00
Punch and Pliers for attaching labels to ear, each \$1.00.
Name on one side and any numbers wanted on reverse side. F. S. BURCH & CO.
om 178 Michigan St., CHICAGO, ILL.

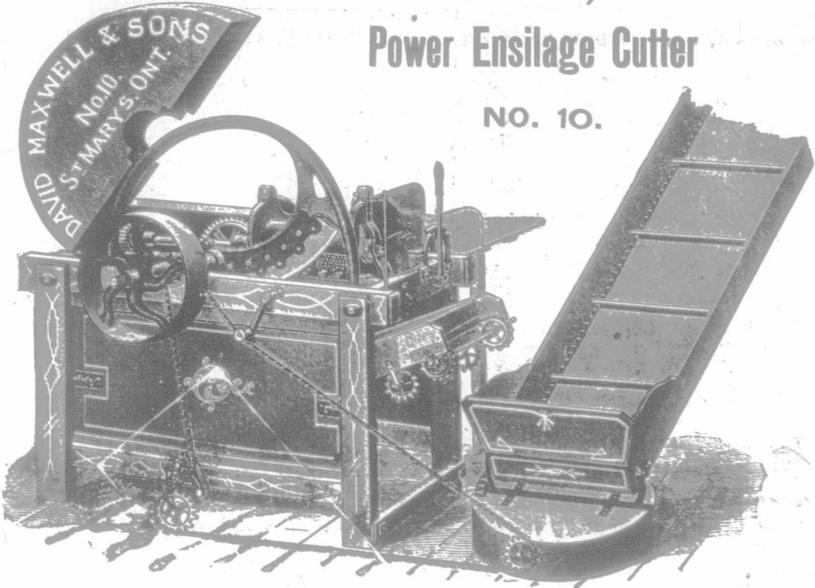
CHAMPION EVAPORATOR
For MAPLE SYRUP and SUGAR. Has a corrugated pan over firebox, doubling boiling capacity and saving fuel; small interchangeable syrup pans connected by siphons, easily handled for cleansing and storing; and a perfect automatic regulator, which ensures rapid and shallow evaporation, producing the best quality of syrup. The Champion is a perfect evaporator.
SORGHUM, CIDER AND FRUIT JELLIES.
THE G. H. GRIMM MFG. CO.,
84 WELLINGTON ST., MONTREAL.
Catalogue Free.

THE ONTARIO VETERINARY COLLEGE (LIMITED),
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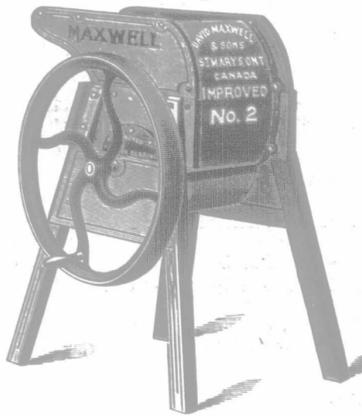
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Send us \$12.50 for a really first-class double-barrelled, breech-loading shotgun, No. 12 gauge, weight from 7 to 8 lbs., best walnut stock, front action locks, rebounding hammers, pistol grip, rubber butt, extension rib, fine laminated steel or Damascus barrels. Length of barrels 30 or 32 inches.

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Same gun very handsomely carved, \$1.00 extra. These guns are worth \$18.00 or \$20.00. Our price, only \$12.50 and \$13.50.

Terms---\$2.50 with the order, balance of the money on receipt of the gun.

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TORONTO ENGRAVING CO.
92 BAY ST
CUTS BY ALL PROCESSES
LIVE STOCK A SPECIALTY.

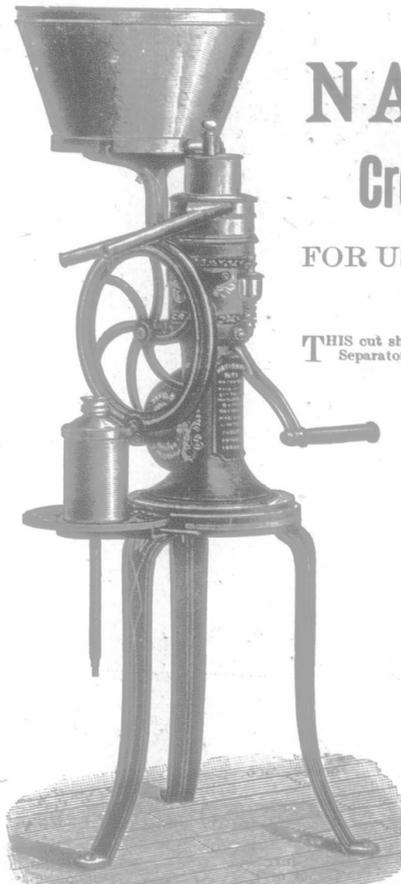
EGGS FOR HATCHING: Brahmas, Games, Min-Dorkings, Hamburgs, Houdans, Polands, Leghorns, Ducks, Geese, and Turkeys. For prices write WM. STEWART & SON, MENK. ONT.

MACHINE \$10
Write at once for Catalog
THE BOWEN CABLE STAY FENCE CO.
Norwalk, Ohio.

PLEASE MENTION FARMER'S ADVOCATE

THE NATIONAL Cream Separator

FOR USE IN FARM DAIRIES



THIS cut shows the "National" No. 1 Hand Power Cream Separator, manufactured by The Raymond Manufacturing Company (Limited), Guelph, Ont. Since the introduction of this machine, it has taken so well that we have not been able to supply the steadily increasing demand. It has proved a decided success from the start. We have consequently been obliged to increase our manufacturing capacity, and have put in a number of the most improved machines obtainable, by which we are now in a position to more than double our former output. No expense is being spared to make the "National" a perfect machine, and we believe we have succeeded so far as to claim that it has no equal for:

- 1st. Closeness of Skimming, and smooth, even condition in which it leaves the cream under all circumstances.
- 2nd. Easy Cleaning. It takes only about half the time that other Separators require, on account of the few pieces there are to handle.
- 3rd. Ease of Running. Its simplicity of construction, having so few bearings, and those being anti-friction ball bearings, makes it such an easy-running machine that a boy or girl from ten to twelve years of age can operate it.

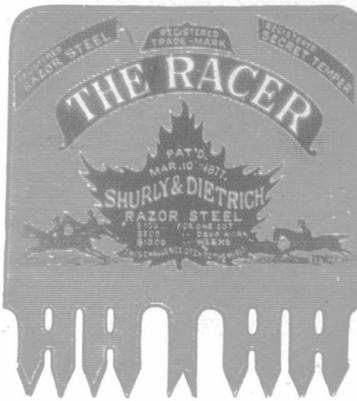
A trial of the "National" is all that we ask in order to ensure a sale to an intending purchaser. The sale of this machine for the Province of Ontario is in the hands of

THE CREAMERY SUPPLY CO., GUELPH, ONT.

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

The Raymond Manufacturing Company of Guelph, Limited, Guelph, Ont.

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Don't throw away your old one—make it new for \$1.00. Re-covering only takes one minute. No sewing. A clumsy man can do it as well as a clever woman.

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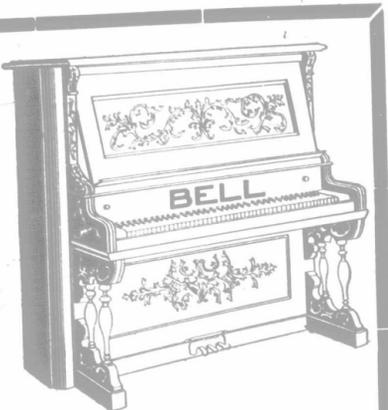
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GOVERNMENT ANALYSIS

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OFFICE OF OFFICIAL ANALYST,

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Blue Ribbon Ceylon Tea"



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Will do all knitting required in a family, homespun or factory yarn. SIMPLEST KNITTER ON THE MARKET.

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