

**PAGES
MISSING**

THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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VOL. XXXVI.

WINNIPEG, MAN., AND LONDON, ONT., JANUARY 5, 1901.

No. 517

A Resolution Favoring a School of Agriculture.

This year there are several Manitoba boys attending the Guelph Agricultural College; there are also a few attending the short course at the Wisconsin Agricultural College; and from personal knowledge we know of many farmers who would gladly give their sons the advantage of a college course, particularly during the winter months, if the opportunity were afforded in our own Province. The Local Government is, according to its platform, in favor of establishing an agricultural school, but so far no move has been made, and while public money is readily granted for the universities and colleges for the manufacture of lawyers, doctors, and professional men, there is absolutely nothing done for the higher education of the agriculturist. Agriculture is the one industry upon which the prosperity of the whole country depends, and it should receive more attention from our Local Legislature. Every one who believes in education along practical lines, calculated to help the young men in becoming more successful farmers, should make their representatives in the Local House understand their views. If the people show that they really want a school of agriculture, doubtless they will get it, for legislators are ever ready to do what will bring them votes.

At the recent annual meeting of the Neepawa Agricultural Society a resolution was unanimously passed urging the need of a provincial school of agriculture. If all the leading agricultural bodies, breeders' associations, etc., would express themselves thus, it would not be long before some action would be taken.

Turn Down the Grade or Unsound Sire.

Some three or four years ago the Neepawa Agricultural Society passed a resolution that in the live-stock classes grades would only be eligible for competition when got by pure-bred registered sires, beginning the year following the passing of the resolution, with the youngest animals, foals, calves, etc., and each year thereafter following the classes up. This resolution has at each annual meeting of the Association since that time been fully discussed, and continued in force by a majority vote of the members. At the last annual meeting of the Association, held in December, it was again voted on and carried, this year including animals three years old and under. The principle is a sound one, and should be adopted by every agricultural society that receives financial aid from the public treasury. In practical application, such a rule applies more particularly to the horse departments, as, generally speaking, cattle, sheep or swine good enough to be taken to an agricultural show are the get of pure-bred sires. But there are many, far too many, stallions used for stud purposes that have no special breeding, and get patronage simply because of the low service fee. While it may not be in accord with our democratic ideas to prohibit altogether by law the use of these nondescript animals, still it is certainly not right that the public's money should be given to encourage in any way their use.

In horse breeding there is, however, abundant evidence everywhere, and we have seen it right in the show-ring at Neepawa, that something more than a certificate of registration in a recognized book should be required to entitle stallions to public patronage. There are stallions, pedigreed stallions, unsound and defective in formation, that transmit the most objectionable qualities to nine-tenths of their progeny, and the use of such horses in the stud is as baneful as that of the mongrel. We believe the agricultural society should go further and place in the same category as the scrub the hereditary unsound and malformed pedigreed stallion, and rigidly enforce the same rule throughout all the classes of young and old.

There is too much of a tendency to award prizes to anything brought forward, under the fear of driving away entries or causing trouble for the judges or the directors.

At the recently held annual meeting of the Regina Agricultural Society, it was decided that hereafter only registered animals, stallions, bulls, etc., should be eligible for competition. It will be remembered that the ADVOCATE strongly condemned the classification of this society in giving prizes for general purpose stallions, calling for no registration, at their last spring stallion show.

If we are to hold our own in live-stock breeding, and meet the ever-growing competition, we must move forward.

Let QUALITY be the watchword of every breeder as we go forward into this new century.

Use Clyde or Shire Stallion to Get General Purpose Horses.

To the Editor FARMER'S ADVOCATE:

I noticed in a recent issue of your paper a letter from "Director," of Cottonwood, advocating the use of general purpose stallions. Now, the first question to be decided, I think, is, what is meant by a general purpose horse? At the Regina Agricultural Association Spring Show, the general purpose class included everything which could not be registered, from a light coach horse to a heavy unregistered Clyde; in fact, judging from the horses exhibited in this class, the term general purpose horse seemed to constitute any class of horse which could not be registered as one of the pure breeds. It seems to me what is really required in a general purpose horse is not that he be a horse of no breeding, but a good, lively, active horse, weighing in fair condition from 1,300 to 1,400 lbs., and suitable for the purposes of the farmer who cannot afford to keep more than one or two teams, and which must be available for all kinds of work belonging to the ordinary farm. The sire necessary to produce such a horse need not necessarily be chosen from any particular breed, and, in fact, it will depend on what type of mare the dam is what kind of a sire must be used. My experience is that for the mares of this country, which are below the proper size, the best stallion to use is a pure-bred Clyde or Shire horse with plenty of life and action, well put together and weighing say 1,500 or 1,600 lbs. One thing I would always say, and that is, in breeding any kind of stock it is not only necessary to use registered sires, but that the greatest care must be exercised in examining the pedigree in order to ascertain exactly the different strains which are combined in the animal to which the pedigree belongs. Without such care it is impossible for a breeder to have any idea of what the qualities of the progeny are likely to be.

I do not say that an unregistered horse is more likely to be unsound than a pure-bred, but, as we have not the means of tracing his ancestry and of ascertaining the families to which he belongs, we are unable to protect ourselves in breeding by the information which the pedigree affords us, and then the constant use of the pedigree has a tendency to weed out those families of pure-breeds which have proved themselves to inherit any particular weakness. "Director" states that if intelligent selection has been made in regard to parentage that there is no danger of perpetuating the poor qualities of ancestors. But how are we to intelligently select without a pedigree, as without it we can only go back a generation or two at the furthest.

At the last summer fair in Regina we find that the first and second prize general purpose teams were bred from registered Clyde sires, and, in fact, had almost enough crosses to entitle them to be registered as pure-breeds. All through the general purpose class the same class of horses were the winners. Then, again, compare the class of horses bred by the farmer who is content to use a grade horse with those of the farmer who chooses the breed and kind of a horse that suits his fancy. If we do so we will always find that the latter is a man who is constantly improving the horses of the country, while the other is allowing them to retrograde.

"REGINA EXHIBITOR."

Institute Work.

It is encouraging to note that at the annual meetings of agricultural societies such a large number have enthusiastically taken up that branch of their work formerly left entirely to Farmers' Institutes. From the local press reports of some of these meetings, it would, however, appear that the inspiring motive was not so much the hope of any benefit that might come from this branch of the work as of obtaining the little extra grant from the Provincial treasury. The directors of agricultural societies are in a position to realize better than most others the great advantages of improved methods in every branch of agriculture, and should be ever anxious to encourage everything tending to that end. That there are immense possibilities for good along the lines of Institute work none will deny. The difficulties in the way of successful money-making agriculture in this country are many, as in every other country; new difficulties are ever occurring, but the fact that a large proportion of settlers have made a success of farming in these Western Provinces affords encouragement, as what one has done others may accomplish. Who is so foolish as to deny that there is much to be learned from the successful about their systems of cultivation, stock raising, dairying, etc. There is, however, a scarcity of suitable speakers available for this work. Few of our successful farmers are in a position to absent themselves from home duties to devote a week or two at a time to benefiting their fellow laborers, and it is worse than useless allowing impractical and unexperienced men to address meetings simply because they can talk. Nothing will disgust an audience quicker than listening to a man posing as a teacher who does not know what he talks about. This is the rock upon which many a farmers' association has been wrecked. He whose duty it is to guide a Farmers' Institute meeting should do so with a firm, judicious hand. Only men practical along the lines upon which they are speaking, and able to express themselves intelligently and concisely, should be allowed to address meetings, as Superintendent Gregg, of the Minnesota Institute system, says: "An Institute speaker who doesn't strike fire during the first five minutes he is speaking I call down without further waste of time." It is a delicate thing for a chairman to call down a speaker, yet it is surely better to run the risk of offending one man than to waste the time of a score or two of men and alienate their sympathies with the whole thing.

While much may be done by the individual societies, the main work must be guided and inspired by the unremitting efforts of the central department, and since the Department of Agriculture has taken hold of this work, we look to it to put forth renewed energy along this line of work. More new men are required to take up the work—practical, level-headed, successful men, who can tell of their experience in a plain, direct way; their political leanings should have absolutely no bearing on their employment, for a man suitable for this kind of work will have common sense enough to leave politics alone when on an errand of this kind. The Government need not be afraid to spend money on Institute work, for if it is well done the people will support it.

Portage La Prairie Agricultural Society and Farmers' Institute.

The Portage la Prairie Agricultural Society, at its annual meeting, held on December 10th, formally amalgamated with the Farmers' Institute, and celebrated the occasion by the holding of a banquet, which was a most successful affair. A number of the prominent farmers and citizens of the town delivered appropriate after-dinner speeches. The election of officers for the ensuing year resulted as follows: President, T. E. Wallace; Vice-President, Sheriff McLean; 2nd Vice-President, F. A. Brydon; Secretary-Treasurer, Wm. Shepperd; Auditor, D. McCowan; Directors—T. A. Newman, J. T. Charlton, E. H. Muir, W. McCowan, D. McVicar, J. P. Young, and W. R. Taylor.

How to Crowd the Institute.

If the right kind of a programme is prepared, the promise of the ladies to take part secured, the meeting properly advertised, and a suitable room, properly heated and lighted, furnished, nothing but a blizzard of the worst kind, or roads utterly impassable, can prevent a successful Institute. Wallace Farmer.

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THE LEADING AGRICULTURAL JOURNAL IN
THE DOMINION.

TWO DISTINCT PUBLICATIONS—EASTERN AND WESTERN.

PUBLISHED SEMI-MONTHLY BY

THE WILLIAM WELD COMPANY (LIMITED).

WESTERN OFFICE:

McINTYRE BLOCK, MAIN STREET, WINNIPEG, MAN.

EASTERN OFFICE:

CARLING STREET, LONDON, ONT.

LONDON, ENGLAND, OFFICE:

W. W. CHAPMAN, Agent, Fitzalan House,
Strand, London, W. C., England.

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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Winnipeg Exhibition Dates.

It has been decided to hold the Winnipeg Industrial Exhibition this year a week later than last, and July 29, 30, 31 and August 1 and 2 are the dates fixed upon. It was thought that a little more time might be required by the live-stock exhibitors this year in order to get their stock into proper fix, owing to the scarcity of good fodder in many districts.

In view of the probable establishment of one or two large Territorial fairs this year, at Calgary or Regina, or both, to come into the circuit with Winnipeg and Brandon, it is desirable that dates be so arranged that the live-stock exhibitors can attend any or all of them. Once an exhibitor has his stock fitted and on the road, the little extra trouble and expense of attending two or three fairs is easily made up, if there are liberal prize lists and an assurance of a good attendance of the class of people with whom he may do business.

The live-stock breeders of this Province desire to secure a larger share of the trade of the Territories, and while it is perfectly true that the Winnipeg Industrial receives a very large patronage from all parts of the Territories, still there is no doubt but that a good exhibit of Manitoba's best stock at the principal fairs in the Territories would greatly assist in diverting more of this trade, especially in bulls of the beef breeds, from the Provinces east of Lake Superior to Manitoba, and the nearer the exhibitions can come to harvest time the more assured their success, as they then come in between haying and harvest.

The Northwest Entomological Society.

The second annual meeting of this Society has been convened for Wednesday, the 16th January, 1901, at 8 p. m., at the town schoolhouse, Lacombe, Alberta, (1) to review the past work of the Society, (2) to devise means for extension of the work, and (3) to elect officers for 1901.

The President will give an interesting address to the farmers on the injurious and beneficial insects of 1900. PERCY B. GREGSON, Secretary.

Lessons of the Past Year.

[A paper read at Institute meetings by S. A. Bedford, Superintendent Experimental Farm, Brandon.]

The past season has been a very unsatisfactory one from an agricultural point of view; but even our misfortunes may prove useful if we take the lessons to heart and profit by them in future years.

Drought and Drifting Soil.—Our first trouble was from drifting soil. The snowfall being light, the soil was not packed and the surface was ready to move off with the first strong wind, carrying the seed grain with it. This same loose, dry soil also prevented a uniform germination of seed, and a portion of the crop grew at once and shelled early, while the balance did not germinate until after the June rains and matured very late. We learned from actual experience that injury from both drifting soil and poor germination can be greatly lessened by deep sowing, but the only perfect remedy is obtained by filling the soil with vegetable fiber. Newly-broken grass-sod answers the purpose admirably—either Brome, Western rye or timothy will do for the purpose, but the first named has given the best sod on the Experimental Farm.

Preparation of Soil.—We also found that the amount of moisture in the soil was influenced largely by the system of cultivation practiced. Land that had been continually cropped for a number of years in succession gave a very poor return, averaging about six bushels of wheat per acre, while summer-fallow plowed in June and surface-cultivated for the rest of the summer yielded from twenty to twenty-five bushels per acre of excellent grain. One of the best fields of wheat was plowed in the fall of 1898 and cultivated on the surface during the summer of 1899. The soil of this field was packed very solidly and the crop received no check whatever from the drought of early summer.

Stooking.—Although the rainfall up to the end of June was unusually light, it was more than made up by the heavy rains later in the season. Cutting had only fairly started when a downpour occurred which scarcely let up for more than a few days at a time until the fields insufficiently drained or where the surface ditches had been filled in were soon flooded and badly-stooked grain became so thoroughly saturated as not to dry out again for weeks. It was noticed that although long, open stooks dried out quickly, they were more liable to blow down. While large round stooks stood up well, they were slow to dry out and were generally badly sprouted. The best were composed of from eight to ten sheaves grouped about midway between a round and a long stook.

Stacking.—On a few farms the grain was stacked directly after the first light showers, and as these sheaves were only wet on the outside, they received no injury from stacking in that condition, and some of our best wheat is from these stacks; but when the remaining sheaves, which had become wet to the heart, were stacked before becoming thoroughly dry, they heated badly and the grain was completely spoiled. The same grain would have given a sound sample if allowed to dry out before stacking.

Summer-fallow.—Owing to the catchy season, the necessity of keeping well forward with this important branch of farm work was emphasized. Where the work was backward, weeds and volunteer grain were so stimulated by the abundant rainfall that they soon obtained full possession, and many fields of fallow have gone into the winter covered with a rank growth. This will make them difficult to seed without a spring plowing, thus greatly retarding spring work.

Mixed Farming as a Safeguard Against Failure.—The small average returns from exclusive grain-growing this year should still further direct attention to the advantage of diversified farming. From all accounts, the only class of farmers in the Province with a balance to the good are those who have stock or dairy products to dispose of.

Pasture.—During spring and early summer natural pasture was very short and the yield of milk small; beef cattle also made slow progress. From this it is evident that uncultivated pasture cannot be depended on for many years: the grass plants are quickly destroyed by close feeding and tramping, and their place taken by useless weeds. If this land was broken up and seeded with grass it would support four or five times as many cattle per acre. We find it impossible to obtain a good catch of grass on the native sod without breaking and backsetting it as we would for a grain crop. Even a thorough cutting up with a disk harrow does not destroy the perennial weeds and they soon choke out the grass. Brome grass is decidedly the best pasture grass for Western Manitoba, and if generally used would enable our stockmen to largely increase their herds and flocks.

Annual Fodder Plants.—Owing to the poor yield of hay in some of the marshes and loss from flooding in others, the supply of good hay is exceedingly small, and many farmers have found it necessary to sell their stock on this account. Had they sown some supplementary fodder plants, such as corn or millets, they could have provided ample food for their stock even during a season of drought. Fodder corn is one of the most useful annual fodders. Only early-ripening varieties, however, should be used, and the field selected should slope to the south or south-east. The variety of millet known as Hungarian grass is one of the best for this Province. As it is important that germination should be rapid, it

should only be sown on newly-plowed land or on moist summer-fallow. It will then get well started before the weeds get possession of the soil, and the return will be from two to four tons per acre. To make the most of the fodder on hand, it should be run through a cutting box.

In conclusion, I would warn the farmers against burning any straw this fall, as it will all be required to winter over the stock now in the Province.

With the oats so light, and in many instances badly saved, they are pretty sure to prove deficient in germinating power and should be tested before sowing. If a small sample is sent to the Central Experimental Farm at Ottawa, they will be carefully tested. There is no charge for this work and the postage is free to the Central Experimental Farm.

Manitoba Crop Report.

Estimated wheat yield of 8.9 bushels per acre:

District.	WHEAT.		
	Area harvested, Acres.	Average yield, Bushels.	Total yield, Bushels.
N. W.	163,250	11.1	1,811,650
S. W.	407,120	7.9	3,216,347
N. Central	293,980	11.	3,233,380
S. Central	337,126	7.6	2,562,157
Eastern	143,940	10.7	1,540,158
Province	1,457,386	8.9	13,025,252

District.	OATS.		
	Area harvested, Acres.	Average yield, Bushels.	Total yield, Bushels.
N. W.	102,300	22.3	2,281,290
S. W.	110,948	15.9	1,764,073
N. Central	63,200	21.1	1,333,120
S. Central	90,010	20.1	1,808,204
Eastern	62,650	22.5	1,409,625
Province	429,108	20.5	8,811,312

District.	OTHER GRAINS.		
	Area in crop, Acres.	Yield per acre, Bushels.	Total yield, Bushels.
Barley	155,111	18.9	2,939,477
Flax	20,437	8.04	164,313
Rye	2,180	10.1	22,022
Peas	750	11.6	8,700

The total grain crop of the Province is 21,788,144 bushels, against 56,000,000 bushels in 1899, the average yields of that year being: Wheat, 17.13; oats, 38.80; barley, 20.4; and flax, 14.

The estimated returns of potatoes and roots also show a falling off in acreage and yield from the previous year. The potato crop this year is put at an average of 132 bushels, with a total of 2,058,210, against 3,226,385 in 1899. Roots, total, 1,452,780, against 2,670,108 in 1899.

The poultry statistics do not show any very marked increase over the previous year:

	Turkeys.	Geese.	Chickens.
1899	65,845	25,155	246,205
1900	61,762	29,165	270,005

It is estimated that \$1,351,000 have been invested in new farm buildings, about equally divided among the five crop districts.

Nearly a million acres of fall plowing is reported, and half a million of summer-fallow, with 153,000 acres of breaking, making in all about 67,000 acres more land ready for seed next spring than there was last. After summarizing the peculiarly unfavorable conditions during both growing season and harvesting, the average of nearly 9 bushels per acre is considered remarkably good, and it is pointed out that, notwithstanding all the drawbacks, it is to be noted that in all districts of the Province, fields that were well prepared, summer-fallowed in 1899, and having a solid seed-bed, yielded much more than the average yield of 8.9 bushels per acre. The Dauphin district shows a yield of from 15 to 20 bushels per acre, and individual yields in many parts of the Province are reported as high as 25 and even as high as 40 bushels to the acre.

The quality of all grains is reported poor, and no estimate is made of the amount of wheat available for export. The hay and fodder crop is also reported poor in yield and quality. In many districts straw will have to be the main feed, and as that is of extremely poor quality, stock can not be expected to winter very well, unless given extra care.

The live-stock report shows up well: 16,500 beef cattle exported, 25,000 stockers shipped West to the ranges, and 3,000 to the United States. It is certainly a more healthy sign that the stocker trade has been diverted from the States to our own Territories, where there is ample room for all the stockers this Province can produce. The swine industry is thus summarized: During the winter of 1899-1900 at least 10,000 hogs were imported from Western Ontario by Winnipeg packers, but during the summer of 1900 more Manitoba hogs were supplied to the packers than during any single season in the past. The receipts for the month of November past were in marked contrast with those of November, 1899. It is estimated that the farmers of Manitoba supplied for all purposes during the year at least 25,000 hogs. Winnipeg, for packers' use and fresh-meat trade, can readily take at least 100,000 hogs each year, and if to this is added the ever-increasing requirements of the British Columbia fresh-meat trade, the number will be much increased. If the packers in Winnipeg could secure a sufficient number of hogs to run their houses to their full capacity, so as to supply the British Columbia market with cured meats, it would be a question of a short time only until the number of

hogs required would be at least 200,000. The possibilities of further increase, as well as the indications of interest of farmers in this industry, are very encouraging. As to the number of live stock in the country, the following figures for the years 1890 and 1900 are interesting, and show an increase in each list, except sheep, which have fallen off over 7,000:

	Horses.	Cattle.	Sheep.	Pigs.
1890	102,655	220,248	33,082	66,011
1900	118,629	237,560	25,806	77,912

The dairy statistics are of particular interest. This part of the report reads as follows:

	Pounds.	Price, Cents.	Value.
Dairy	2,083,920	14.45	\$301,145.61
Creamery	1,254,511	19.18	240,515.10
	3,338,431		\$541,661.04
	CHEESE.		
Factory	1,021,258	10.02	102,330.05
Total value			\$643,991.09

Although the past season has been unfavorable to the production of dairy products, on account of the drought and the extreme heat in the early part of the season, the business shows a thriving condition and a rapid increase. The price of dairy butter remains about the same, but the production has increased about 50 per cent. over last year's figures. The price of creamery butter is forty-three hundredths of a cent higher than last year, which is higher than any year in the past five years for Ontario creamery. The production is 25 per cent. greater than last year, with little complaint as to quality.

The price of cheese is twenty-three hundredths of a cent less than last year, but the price of 10.02 cents per pound is greater than any year in the past ten years in Ontario.

The production is about 20 per cent. greater than last year, and of seven dealers in Winnipeg, two report the quality slightly inferior to last season. It is well known that the progressive farmers of Manitoba are keeping up with the times.

Some adverse criticism has been directed against the dairy industry of the Province, but the foregoing report clearly shows that the industry is in a good healthy condition.

The Shorthorn in Dairy Districts.

Prof. Curtiss, of the Iowa Agricultural College, who is announced to address the Pure-bred Cattle Breeders' annual convention next month, when speaking before a meeting of Shorthorn breeders in his own State recently on the Shorthorn in the dairy districts, is reported as follows in the *Wallace Farmer*:

"He referred to Iowa's advanced position as a dairy State as compared with fifteen years ago, and also thought that high-priced lands would, from henceforth, affect this question, because it has been demonstrated that beef-raising on high-priced lands is not profitable; while, on the other hand, no lands in Iowa or Illinois would stand continuous cropping. He thinks these conditions will force the farmer to get more out of the cow, and thinks the solution is in the cow that will be good for the dairy and yet raise a good calf. They have demonstrated at the Experiment Station that this is possible. A picture of a Chicago cow was exhibited that had produced 355 pounds of butter last year and yielded a net profit of \$11.42 from milk alone, while the calf was sold to head a Shorthorn herd in Minnesota at a top price. Another cow at the College Farm, College Moor, gave 8,888 pounds of milk during last year and averaged 4.56 per cent. butter-fat. Her calf went to head a herd in Wisconsin. The professor thought the entire herd at the Farm would average 350 pounds of butter per year. He favors Shorthorns bred for milk, as he found them in England, where they are the leading dairy breed. He stated that Duthie, the noted Shorthorn breeder, of Scotland, had told him that his best milkers were also his best breeders, and that he paid much attention to milking qualities. Mr. C. S. Barclay, of West Liberty, in the discussion that followed, stated that in his thirty years' experience as a Shorthorn breeder he too had found his best milkers to be his best breeders. Prof. Curtiss thinks that the milking qualities of the Shorthorns of this country can and should be developed. He does not favor the crossing of Shorthorns with any of the distinctive dairy breeds, although he thinks the distinctive dairy breeds have their place. To properly raise the calf by hand, he advocates the use of the cream separator, and to the ration of warm milk from the separator he would add corn and oats and a little oil meal to balance up the ration. He thinks in this way the cow will pay a profit in milk and raise a calf nearly as good as the strictly-beef cow.

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JOHN BROOKS & SON.

Glen Ross, Dec. 22nd, 1900.

Poultry Raising in Assiniboia.

THE WINTER CARE AND FEEDING OF A SMALL FLOCK FOR PROFIT.

To the Editor *FARMER'S ADVOCATE*:

I have been doing for so many years just what most of our farmers and their wives do—that is, keeping poultry in a sort of desultory way, without regular methods, without proper means, and without really being able to see clearly where I lost or gained—that I fully realize my lack of knowledge and disability to write on the above subject which you have suggested to me, but I will do my best.

I am aware that there are many farmers who keep and raise cattle, hogs and horses in this same shiftless manner. They never know exactly the cost of feeding, and it altogether depends on their feelings at the time of talking on the subject whether they consider their stock has paid or not. When they have made a sharp bargain, it pays; when the other men have been the sharers, it does not pay. Most of these men at the same time are thoroughly convinced that hens do not pay. They do well enough to consume the waste on the farm, and the cooking cannot well be done without eggs, but pay? Of course not. Now, to divide my text into sections, as the old-fashioned preachers used to do, I will begin at, firstly:

Winter Care.—As I am writing in Assiniboia, I take for granted that on or about Nov. 1st we shut up our fowls. I am also writing for the benefit of people in moderate circumstances; therefore, I will consider, if possible, what care can be given in such cases. Any farmer, if he has the will, can build or provide a warm henhouse. This is essential. When fowls are kept in a place so cold that their combs or feet are in danger of freezing, they may exist, but they will not thrive, and certainly will not pay. The building should be large enough to allow convenient room for feeding without too much crowding, and without having to pick the food from under the roosts. There also must be light, plenty of it, if possible from the south. Not too large windows, but enough to show light in every corner, from sunrise to sundown.

I do not approve of a place at the back of the horse and cow stable for hens. It is not good for either the animals or the poultry, and though the fowls may get some of their living from picking around the other animals, they are apt to be stepped on and maimed or killed. Then, in stables where no better provision is made for fowls, there is not likely to be a window from which they can get a ray of sunlight. A good henhouse can be built adjoining the stable and not opening into it. Now, supposing we have settled about the building, we ought to keep it dry and clean. Once a week, in our hard winter weather, a thorough cleaning is necessary. If there comes a thaw, it must be done oftener to be at all comfortable. A large box should be placed where the light during the greater part of the day will fall directly upon it, and kept two-thirds full of dry dust for the hens to roll in. They enjoy this quite as much as a healthy baby does its morning bath. Ashes, especially coal ashes, will answer this purpose very well, but they must be changed frequently, for as soon as they become damp their efficacy ceases. From coal ashes the fowls get cinders enough to supply the grit which grinds their food, and from wood ashes they pick bits of charcoal, which greatly assists their digestion. Of course, it goes without saying that the ashes must be cold before carrying to the box, or you may some day see the whole business go off in smoke.

Drink.—Good pure water they require every day. Fowls do not drink as much in winter as in summer, but they must have it always. I have known people who threw in a shovelful of snow once in a while, and thought because the chickens picked at it they were satisfied. I wonder if those same people ever tried for even one day eating snow instead of drinking! The drinking vessels may be of whatever pattern is most convenient, but they should be so arranged that they cannot be spilled, and so that the fowls cannot get their feet wet. I have found small pickle pails answer the purpose very well, when they can be obtained. If the house is warm enough to keep water from freezing, the fowls will live and do well.

Feeding.—This is a much vexed question. There is such a diversity of opinions on this matter that I scarcely know how to approach it. But as I know of no kind of fowl that will live without food, I presume we are bound to consider ways and means. I have found that with the average farmer this is where the shoe pinches. He recognizes that his horses need straw, or even hay, and, yes, oats, even in winter. There are a few men, I regret to say, who think if a horse works not, neither shall he eat, but these men are few and far between, for which I am sure the equine race are truly thankful.

Any farmer knows that his cattle will not come through a winter and be of service the following summer on scanty and poor food. He also sees that his stock hogs have enough to eat; but the one thing he does not see, is why hens must be fed when he is getting no eggs. He begins this theme early in the fall, as soon as the "nasty, ragged-looking things" are going about "eating their heads off." Perhaps the poor, misguided being does not know that if the bird is cared for better than usual during moulting season it will feather out all the

sooner and be better prepared to face the cold. Well, we give him this information just now and here. Then when we have them comfortably housed for winter, they must be fed regularly and with a variety of food. Now and then we see a generous farmer who believes in feeding his hens, not because they pay, but for the reason that he will not have any starved animals around his place. He will throw a pailful of wheat down in a heap, perhaps twice as much as the flock can eat at a meal, and when remonstrated with, replies: "Well, if they do not eat it now they will some other time." This is not proper feeding. If at all possible, have the feeding floor covered with chaff or some loose litter, then scatter the grain so the hens must scratch for it. You will at once hear their cheerful, busy conversation, as they keep up the exercise. This is healthful feeding. Once a day, I prefer at noon, give them cooked food. Where there is stuff such as pigweed seed, potato parings, and scraps of food of any kind, cook it all together and see how eagerly they will gobble it up. I have disposed of bushels of pigweed seed in this way, when I have known of farmers who were burning it up to get it out of their way. For Northwest feeding of fowls, I would like wheat for morning meal, cooked food at noon, and oats at night. Oats are stimulating and not so fattening as wheat, therefore for fowls which have no outdoor run in winter, and from which we hope to get some eggs, I prefer one meal of oats. About once a week throw them a half dozen whole raw turnips. They will enjoy them immensely.

Now, I think I hear someone say, "But she is forgetting the thirdly—for profit." Not at all. Just let me ask a question or two. Can some of you farmers tell me what is the use of throwing away feed on all those cows that give no milk in winter? I can easily see why you feed chop and hay in the spring, when you get the full pail, and when there is a nice little calf to raise. And that old sow! Is she not a perfect nuisance, always grunting for more, just when it is so icy that you slip every time you carry her a pail of slops? "Why," you say, "this woman must be crazy, if she is a farmer's wife, not to see the ridiculousness of these questions." Not a bit of it. Your hens will pay for their proper winter care all next spring and summer, just as surely as will your cows and hogs. Try it this winter and see. Grain, this winter, is a high price, but for good eggs and poultry there is always a ready market, and even with the high prices of grain, I am sure, if properly managed, hens pay. I have not said a word of who is to care for the fowls on the farm in winter. That is according to circumstances, but women can do it all, if in moderate health and if so inclined. I think it is healthful and cheery work for women on the farm in winter.

MRS. A. NEVILLE.

Central Assiniboia.

The Live Stock and Dairy Conventions.

Arrangements are being completed for the annual conventions of the live-stock associations which are to be held in Winnipeg on February 19th, 20th and 21st. This will be bonspiel week, and it is expected that very low rates over all railway lines will be offered. Tuesday, February 19th, will be the Sheep and Swine Breeders' day; Wednesday, the Pure-bred Cattle Breeders'; Thursday, the Horse Breeders', with joint meetings each evening. The Dairy Association will meet on Thursday for ordinary business, and hold their open convention on Friday, February 22nd.

Among the prominent speakers that are expected are: Prof. Curtiss, of the Agricultural College, Ames, Iowa; Prof. Carlyle, of the Agricultural College, Madison, Wisconsin; Alex. Galbraith, the Clydesdale breeder, of Janesville, Wisconsin; Prof. Robertson, Live Stock Commissioner Hodson, Prof. Ruddick, J. H. Grisdale, Prof. Day, Dr. Smith, and a number of prominent local speakers.

More Money Needed for Wolf Bounties.

The *Medicine Hat News*, in a recent issue, endorses a proposition made by W. R. Abbott, of Maple Creek, to the effect that the Dominion Government give back to the ranchers, to be expended in the payment of wolf bounties, the money raised out of the land leases held by ranchers. The *News* points out that the Western Stock Growers' Association devotes a considerable portion of its funds toward the destruction of wolves, that the Territorial Government also makes a similar grant for this purpose, and contends that the ranchers would be encouraged to lease more land from the Government if the money was to be devoted directly for their own benefit. It further says: No one thing menaces the stock industry as does the wolf and coyote nuisance. The ranchman who finds that he is raising beef for the wolf market, instead of a more profitable market, is in a bad way, yet it is the experience of almost all ranchers to have losses from this source.

Winter Poultry Show.

The annual winter poultry show held by the Manitoba Poultry Association will this year be held in Brandon, the dates being January 29 to February 1. The poultry fanciers of Brandon are devoting a great deal of energy to make the show a success, and it will doubtless be one of the largest and best ever held by the Association.

A Commodious Farmhouse.

To the Editor FARMER'S ADVOCATE:
I send you a photograph of my house, and also plans. I have not the exact figures of cost at hand, but it was about \$2,700 above the cellar. The house is all back-plastered and well built. The plans may contain some useful ideas for some of your readers.
DAVID JACKSON,
Green Hills Dairy, Newdale, Man.

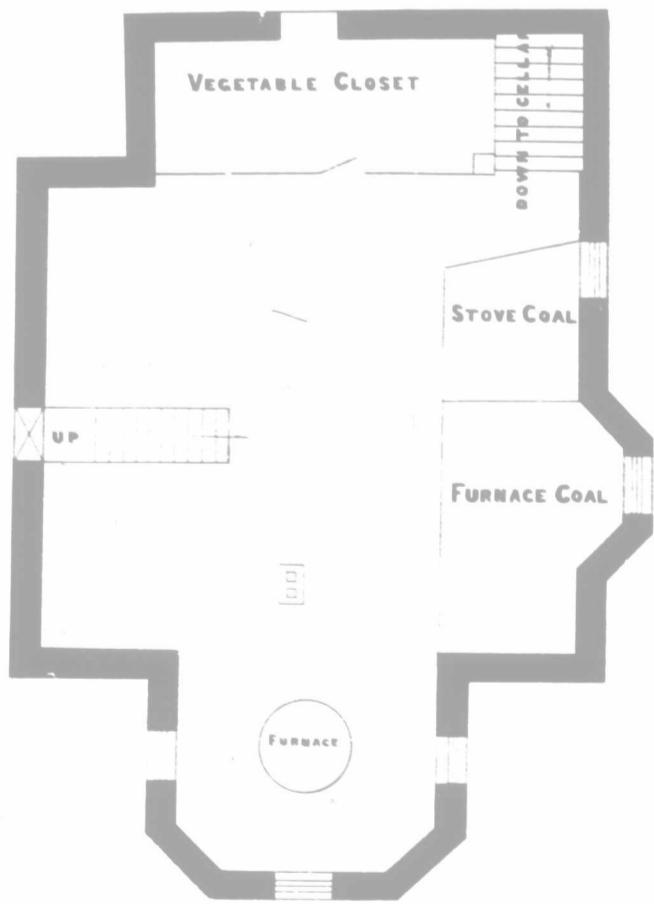
The Character of Western Horses.

BY JOHN HAWKES, CARNDUFF, ASSA., N.-W. T.
I should like to supplement what I had to say in the ADVOCATE of July 5th, 1900, on "Horse Raising in the Territories," by some further remarks on the characteristics of Western horses. My attention has been called to some remarks which it is thought should not be let pass without comment. Western horsemen will have to rely on markets outside the Territories, and anything that affects the reputation of Western horses touches the pockets of breeders, and is, therefore, worthy of attention.
Recently, in a contemporary, an answer was given to a correspondent, who, having seen a



FARMHOUSE OF DAVID JACKSON.

report of Western horses being sold in Toronto, wanted to know why such horses are not sold at central points in Manitoba. The correspondent also wanted to know of the class of colts raised from Ontario mares taken West several years ago. The reply, although of course made in good faith, is not apt to help the horse business of the Territories. There is a measure of truth in it, but the case against the Western horse is put altogether too strongly, while the editor has very little to say in its favor, and the reply is given under a misconception as to how the Western horse gets his char-



CELLAR PLAN, DAVID JACKSON'S HOUSE.

acteristic of uncertainty. It is alleged that "there are considerable varieties of Western horses, and the worst sorts are most numerous." A few years ago this probably would have been a fair statement, but I hardly think it is so to-day. The Western horse is unsparingly condemned for his tendency to run away. In passing, I remark that this tendency is not confined to Western horses. The point, however, where the error comes in, is as to how this tendency came to be im-

planted in the broncho. The writer says: "Give them (Western horses) a week at grass or in the stable, and it will take another week to tame the old Indian that has been revived by those few days of comparative idleness. The frequent runaways we read of in local papers are generally made by these half-civilized brutes, which see a terror in every scrap of paper on the street. The tendency is simply the revival of the instinct which enables them to avoid wild animals, and can hardly ever be thoroughly worked out of them. This is the general experience, and though it is much modified by the introduction of well-bred sires, yet the dam has often greater prepotency in transmitting this tendency than the sire to breed it clean out."

Now, if the foregoing be true, it is discouraging, for it points to inherent vice in the Western horse—hard to breed out, and, indeed, more or less un-eradicable. Fortunately, as I shall show, this is not in accordance with the facts. There is no inherent vice, because a dam or sire cannot pass on to its progeny any quality it does not possess itself either in a latent or active form. But if the contrary is the case, and there is little or no hope of breeding an animal with a reliable temper, the prospects of the business would be disheartening. We shall always be producing a damaged article, and can never hope to touch top prices. We may breed the finest heavy draft horse, but if, simply because he bears the Western brand, it is going to be assumed that there is a vicious strain in his blood, which will be sure to crop out in a tendency to run away or smash things, the animal, magnificent in all other respects, is going to be depreciated in value to such an extent that, when heavy transportation charges to market are paid, there is not going to be much money left in breeding him. The same remark applies, of course, to high-class drivers and to saddle horses. By the careful and judicious use of blood we may or do produce some very fine horses, but if immediately the brand is seen it has to go without saying that the driver will run away first chance, and the saddle horse will back whenever it has a mind to, all hopes of getting high prices may be abandoned. Our horses may be handsome, hardy, fleet, muscular, powerful and sound, but if they are, after all, only "half-civilized brutes" who can't be made any better, our best and most careful efforts in breeding will be largely thrown away.

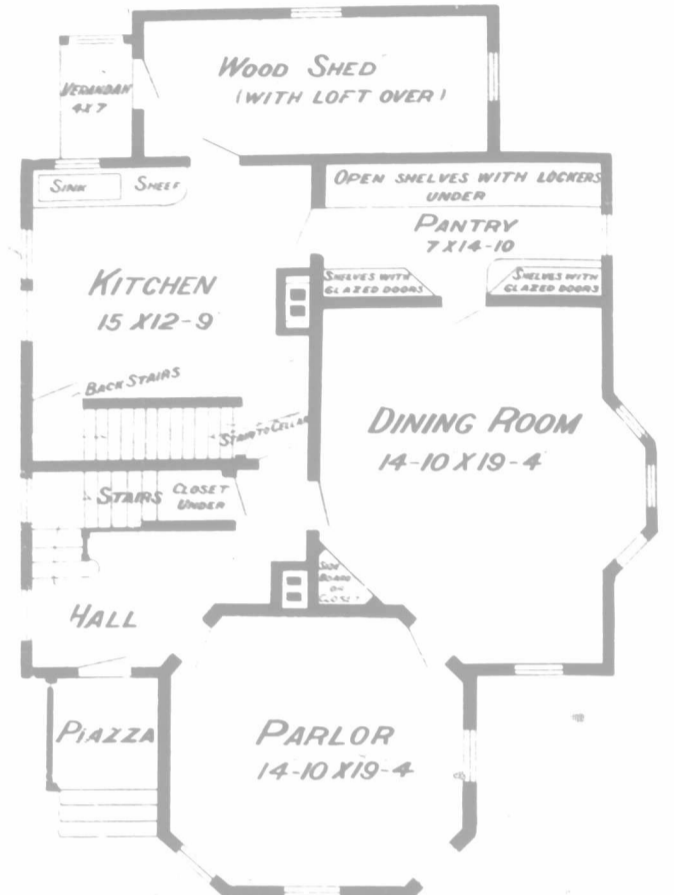
The question, therefore, whether the Western horse inherits permanently vicious tendencies is one of the first importance. To start with, the propensity is much exaggerated in the popular mind. There are hundreds of broncho teams in the Territories to-day steady as rocks, but let a team of bronchos run away, and everybody puts it down to the broncho blood as a matter of course. Let a Canadian team run away under precisely similar circumstances, and nothing is said about the breeding. But, if exaggerated, there is no doubt that many bronchos are unreliable, and the proportion is much larger than in the East, while when a broncho is bad he is bad enough for anything. But his "half-civilized" blood has nothing to do with it. The Indian strain has nothing to do with it. If bred or raised on an Ontario farm, they would come to the harness or saddle the same as Ontario horses do to-day.

Anyone with practical knowledge of the native or Indian horse—the shaganappi—will rather smile at the bare idea of tracing the devilry of the broncho back to him. The Indian pony is a patient animal, and the notion of his scaring at a leaf, or scaring very much at anything, much less transmitting a strain of fiery and uncontrollable energy to his descendants, borders a little on the absurd. His distinguishing qualities are hardiness and endurance; certainly he is not a very good representative of the "fiery untamed steed" of the poet. Still, many of them develop a good turn of speed, and racing is a favorite amusement of the Horse Indians. The writer has seen thousands of Indian horses, and his memory fails to record anything along the line under discussion. On the contrary, for months using them out of the bands for draft, he never saw any tendency to run away or to misbehave in harness, and the runaway tendency certainly does not come from the native strain. It is accounted for in a very different way. The ordinary history of many Western ranch horses is that they are foaled on the prairie, and live practically the life of a wild animal till four, five or six years old. They never have a halter on, and are not only "half-civilized," but wholly uncivilized. The one occasion, when they are branded, is not calculated to improve them in the line of domestication. Then this untamed brute, full of wild life, is roped, thrown, mounted and conquered by force of arms, as it were, and presently finds itself on a farm or in a city. As long as the animal is worked, and its spirits kept down, this forcible and violent breaking-in holds good, but when it is rested, or begins to "feel its oats," the wild life of its early years, and which has become from foaling time its true nature, asserts itself, and there is a breaking out such as might be expected from such a breaking in. Ranchmen recognize this, and the idea is to halter-break when young, or bring them to harness or saddle by ordinary means, without allowing them to attain full age and then engaging in a violent struggle for mastery, which the brute beast never forgets if it has any spirit. This spirit, we repeat, does not come from the ancestry which is associated with the Red River cart or the travois.

There is very little, as a general thing, of the

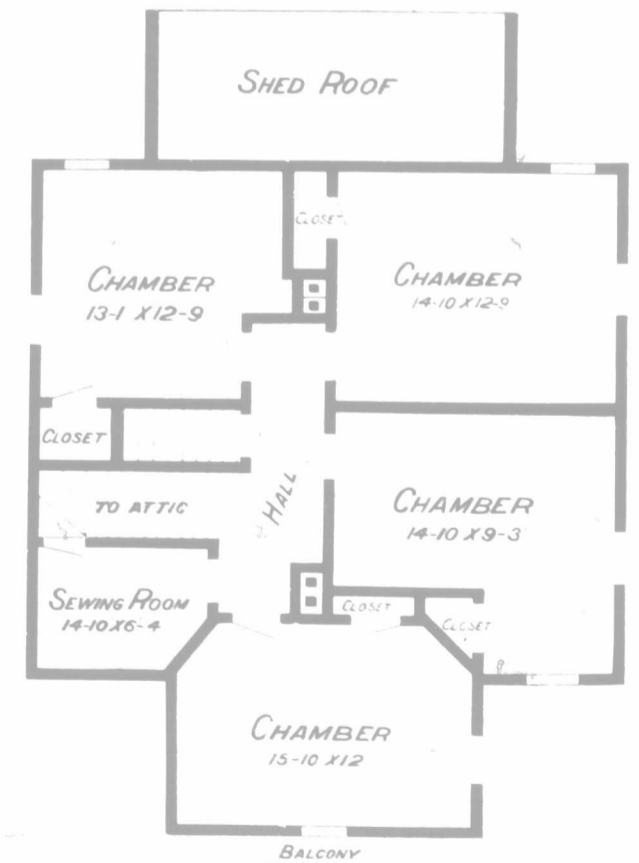
skittish about the native strain, although there is an occasional buck-jumper among them. As soon as ranches are conducted on different lines, the Western horse will be a different product. When the rough-and-ready "broncho buster" becomes no longer a necessity, so soon will the popular idea of the broncho no longer be true to nature.

For many years I had an opportunity of watching the progress made by a certain breeder, who started with native and mountain stock. After a time he purchased a fine Clyde ("Bravery," who will be yet remembered in the Brandon district), and many heavy draft teams have of late years



FIRST-FLOOR PLAN, 18 X 31 FT. 6 IN., DAVID JACKSON'S HOUSE

been sold out of that band, and there is no trace in them of the qualities usually associated with the name of broncho. The band, which numbers about three hundred, is run in the neighborhood of a town, and has to be constantly herded. They never get really wild, and there is the whole secret. It is the way they spend the first few years—the way they are raised, followed by the rough and sudden way they are brought into use—which accounts for the unreliability of Western horses, many of whom are full of good blood and high-spirited accordingly. There is no uneradicable vice in them, and when they are differently managed and broken there will be differ-



SECOND-FLOOR PLAN, DAVID JACKSON'S HOUSE.

ent results. If the history of most runaway bronchos could be traced, it would be found that practically they were once more or less undomesticated animals. The wonder is that such a large proportion of these horses are quiet and tractable, and not that so many of them cut up as they undoubtedly do. There is a great future before the Territorial horse-breeder, and there is no reason why, with proper handling, a Western horse

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should not be as reliable as an Eastern animal. But so long as the majority are bred on ranches, which have no more stabling than will do for the stallions and riding horses, and never see the inside of a stable till they are fully developed in body and habit, so long will the Western horse largely deserve its present reputation. But this is not a necessity. In conclusion, I think the facts dispose of the allegation that the prepotency of the Indian dam has anything to do with the question, for, as before stated, neither dam nor sire can impart to offspring qualities not inherently possessed by themselves. The Western rancher is getting on the right line, and although it will take a long time to disabuse the public mind of the idea, the time will come when it will be recognized that a Western horse may be as reliable as one bred on a homestead in Ontario.

Wheat, Minnesota No. 163.

In 1899 the Experimental Station of Minnesota issued a bulletin containing in detail the researches of Prof. W. M. Hays and Andrew Boss into the varieties, breeding and cultivation of the wheat plant. A most excellent bulletin it is. Recently, in the *Farm Student's Review*, Messrs. Hays and Boss published the following particulars regarding a variety called Minnesota No. 163, for which they claim great superiority over the best known varieties. Although particularly recommended for Southern Minnesota, it looks as if this variety was worthy of a test in this Province. Would it not be well for our Experimental Farms to investigate the merits of this.

In 1899 and 1900, the Minnesota Experiment Station distributed several hundred bushels of Minnesota No. 163 wheat. This is a hard Fife wheat, which at University Farm during the past six years has averaged two to five bushels per acre more than the best Fife and Blue-stem varieties commonly used in Minnesota. Here the best Fife and the best Blue-stem varieties used for parents of new wheat are compared with this new wheat.

This wheat was originated by a system of rigid breeding, by selection begun in 1889. During the first two years only one seed was planted in a hill, that the best plants might be chosen. The yield was recorded under conditions of soil and field management no better than on many of the best farms of Minnesota. No commercial fertilizers were used. The fact that these comparatively large yields represent six annual crops 1895-6-7-8-9 and 1900, is conclusive proof that the soil was only moderately manured with stable manure, because during some of these years heavy manuring would have caused the loss of the crops by lodging. Under these conditions common stocks of Fife and Blue-stem wheat yielded about twenty-five bushels per acre, while Minnesota No. 163 wheat yielded twenty-nine bushels.

The averages of two milling and four baking tests show that Minnesota No. 163 wheat is identical with our best No. 1 hard wheat in selling quality, in milling quality and in baking quality.

Every one who has this wheat should raise and sell it for seed, that every farmer may have seed of it. No other wheat has such a pedigree of actual performance as to yield of grain and money value per acre in Minnesota. Other of our new wheats are pressing it hard; some which promise to surpass it in value are now under test at University Farm, but at present this wheat should be the most in demand of any wheat in Minnesota. Every farmer or seed dealer who is so fortunate as to have some of this seed to sell should have no trouble in selling it at a profit.

Its yielding quality warrants as high a price as any seed wheat ever offered to the farmers of Minnesota. The figures as to yield and quality of this wheat at the Minnesota Experiment Station warrant our giving it our full and unqualified endorsement. It may not do well on all soils, probably will not, but it is worthy of extensive trial in every county in Minnesota, and it will doubtless be a valuable acquisition to surrounding States. In counties where it succeeds as well as at University Farm, it should gradually take the lead over the wheats commonly grown. A wheat does not always yield well for the first year on a new soil.

Taking the figures of the Experiment Station at their face value, as we do, it is reasonable to hope that this variety, if generally used, especially in Southern Minnesota, would increase the average yield of wheat on our farms at least one bushel per acre. If this be true, every bushel of this wheat in existence and in good condition for seed is worth very much more than seed growers and dealers are asking for it.

Feeding Damaged Grain.

Many enquiries are being received as to the feeding value of damaged grains. It would seem, from investigations that have been made, that wheat shrunken and bleached is almost as valuable as a stock food as sound wheat. It, of course, contains a greater proportion of bran, which makes it safe to feed without other grain being mixed with it. Of course, musty or moldy grain or feed of any kind is not safe feed for any kind of stock, but even such grain can be used with comparative safety if cooked. A mixture of weed seeds, most of which are of an oily nature, no doubt adds very considerably to the value of such feed, especially when boiled or thoroughly steamed, and where there are many weed seeds they should never be fed without first being cooked.

The Farmer and the Railway.

The revival of the proposal to establish in Canada a railway commission to stand between the shipper and the transportation companies once more brings into the arena of public discussion the question of rates, transportation facilities, and the respective rights of individuals and corporations. The three producers who have felt, perhaps, most seriously and directly the tax of transportation charges upon their industry have been the cattle feeder, the fruit-grower, and the Western wheat-grower. Once the charges become sufficiently onerous to hamper the progress of these industries, then transportation becomes a menace to the well-being of the country, and a source of discontent.

One of the foremost railway men in America, Mr. Paul Morton, who has charge of the entire freight and passenger traffic of the Atchison, Topeka and Santa Fe Railroad, the third largest in the world, having some 800 miles of track, and employing over 30,000 hands, states in the N. Y. *Independent* that one fifth of all the wealth in the United States is invested in railway securities, and the people owning them should be protected from unrestrained and destructive competition. To do that, and protect the small shipper, he favors legalized pooling under the Interstate Commerce Commission rather than further concentration of ownership, or government ownership or control. But if the owners of securities are to be safeguarded, what about the people? From governments and municipalities, millions of dollars in bonuses, millions of acres of public lands and various other privileges have gone to establish railways, so that we should say the people have a vested interest in these roads. Having very largely helped to build the roads, and then paying for the service the roads render, they should certainly have it upon equitable terms. They are common carriers, and Mr. Morton himself admits that all shippers and travellers should be treated alike, just as they are in the purchase of postage stamps or in the payment of customs duties or inland revenues. The FARMER'S ADVOCATE believes that to be sound doctrine, and were it enforced the small shippers would not be crowded to the wall and all would get a fairer return for their products.

Within the past fortnight two organizations have placed upon record their convictions upon the subject—one the Fruit Growers' Association of the Province of Ontario, meeting in Brantford, and the other the large representative gathering of farmers and stockmen assembled at Guelph during the week of the Ontario Winter Fair.

The Fruit Growers resolved, on motion of Mr. D. J. McKinnon, of Grimsby, —

"That, in the opinion of this association, the time has arrived when a railway commission, appointed by the Dominion Government, should be given full power to regulate freight and passenger rates upon an equitable basis."

In support of the foregoing, Mr. A. McNeil, of Windsor, contended that the Ontario grower was being discriminated against, to the advantage of his United States competitor. A basket of grapes, that sold in Ontario for 11 cents, had to be sold in Brandon for 50 cents, because of the freight rates. It cost \$100 to send a carload of grapes to Winnipeg in cars that otherwise would go empty, and it cost \$50 to bring a carload of other produce of no greater value from Winnipeg down here. Instancing the discrimination against them as Canadians, he said an Eastern Ontario canner could buy peaches in Grand Rapids, Mich., and get so much cheaper freight rates than from Essex County as nearly to make up the duty. Freight on apples from Ontario to Liverpool was from 85 cents to \$1.25, and from the United States as far west as the Mississippi from 56 cents to 80 cents. He knew also, he said, that this discrimination was retarding the livestock industry in the same way. Corn which the stockman required for feeding could be shipped from Detroit to Quebec for 11 cents, and from Essex County the rate was 18 cents. For the same reason American corn could be laid down at less cost throughout Western Ontario than could Essex County corn.

The Winter Fair meeting at Guelph adopted the following resolution:—

"That this convention of Ontario farmers, representing every county from Essex to Glengarry, is of opinion that the Dominion Government should take immediate action for the purpose of placing Canadian farmers in at least as good a position as their American rivals in the matter of transporting their products of the farm to the European market; and that, to this end, we believe power should be obtained at the forthcoming session of the Dominion Parliament for the appointment of a commission which shall have full power to regulate and control freight rates on Canadian railways and the allotment of space and charges for the same in ships sailing from Canadian ports; and that a copy of this resolution be forwarded to the Dominion Government."

When the freight and other charges on a fat

steer from a Western Ontario point to Liverpool amounts to between \$20 and \$30, it becomes a very serious deduction from the returns of the feeder. Mr. Thos. Crawford, M. P. P., who has had an extended experience in the cattle trade, pointed out at the Guelph meeting that a car of cattle from Listowel, in Western Ontario, costs from \$10 to \$20 more in freight to Boston, Mass., than a car from Chicago; while from Toronto, the freight to Portland, Me.; Boston, Mass., or St. John, N. B., equals Chicago rate, the shipper in the latter having also the advantage of rebates. During the past summer it cost at times \$5 to \$8 per head more to ship from Canadian ports to England than from American ports. Herein we find one of the reasons why the beef cattle industry in Ontario in recent years has been decadent and the character of our beeves deteriorating. Farmers concluded that it did not pay them as well as dairying, consequently the use of good beef-type bulls was discontinued, and their places filled by dairy sires; too many immature bulls were used, and in many cases the wretched scrub male animal held sway. It was a long step in the direction of reviving the industry when the Canadian Government put the feeders' raw material—corn—on the free list, but the disability of excessive freight rates still holds the Ontario farmer at a serious disadvantage, compared with the States feeders, who have been able to buy our stockers in thousands, feed them on their cheap corn, and enjoy the advantage of lower and probably better transportation for the finished product.

That there is ample room for a strong railway commission is quite evident from the foregoing considerations. But when the charter rights and the increasing power of these vast concentrated transportation companies are considered, it can readily be seen that a commission will have an arduous task before it, and everything desired will probably not be achieved, which we believe has been the case with the U. S. Interstate Commerce Commission and the commissions appointed in various individual States. But the agitation for redress must be kept up, and the independent railway commission, of which the *Toronto Globe* is the foremost exponent, would seem to be a more likely instrument than the present inefficient Railway Committee of the Dominion Privy Council. One thing the FARMER'S ADVOCATE would insist upon, and that is that one or more of its members be men qualified specially to represent the stockmen and farmers of the country, who are primarily and vitally concerned in the equitable adjustment of transportation questions. Corporations are popularly supposed to have no souls, and however that may be, the executive officers of these organizations are only human, and are more or less engaged in looking out for themselves by efficiently managing the properties with which they are entrusted, in order to earn dividends for the shareholders. We may therefore assume that they will, in the matter of rates, impose all that the traffic will stand, and if the ruinous competition of a rate war has cut down receipts, there will be an effort to recoup by levying on the traffic from non-competing points, or upon the small shippers. A properly-constituted commission, invested with full powers, should be able to redress many grievances and secure the producer a better return for his labor and investment. The experience of the present Canadian Government in exacting more favorable Western freight rates from the C. P. R., in letting the Crow's Nest Pass R. R. contract, shows the imperative need for force in these matters, and the advantage of having some efficient lever to apply. Consequently it seems to us that the Canadian people should retain and probably extend further westward the connections of the Intercolonial Railway which now unites Montreal and the seaboard. Have we any reason to hope for good from a railway commission? The success of organized effort on the part of the breeders of pure-bred stock in Ontario to obtain better facilities and more favorable rates for the transportation of animals required in different parts of Canada for breeding purposes proves what can be done. In this direction, and in promoting public exhibitions, these associations have demonstrated their usefulness, and in these two directions their efforts will be continued; but if we read aright the signs of the times, the great battle of the future will relate to the efficient and reasonable transportation of animals and food products, and in the conflict—if the term be not too strong—these organizations can prove a valuable ally of a railway commission in conserving the agricultural interests of the country.

"At the dispersal sale, in September, 1875, of the famous herd kept at Aylesby Manor, near Great Grimsby, by Mr. Wm. Torr," writes Mr. John Downing, "Mr. T. C. Booth was a big buyer. He gave the enormous sum of £12,122 for the twelve females purchased by him on that occasion, or an average of £1,000 apiece. The Rev. Thomas Stanforth also figured as one of the principal buyers at the same sale, Highland Flower being secured by him at 1,500 guineas and Heather Flower at 1,000 guineas. The sale proved so successful that the eighty-four lots which changed hands realized within a few pounds of £50,000, or an average of over £510 apiece. It is interesting to learn that of the thirteen bulls disposed of at this sale, two came to Ireland, Sir William Stirling took one to Scotland, Mr. Harrison secured one for California, and Mr. Marshall took another to New Zealand. The rest found new homes in various parts of England."

The Ontario Provincial Fair.

The annual show of cattle, sheep, swine and poultry, and the milking trials of dairy cows, held under the auspices of the Ontario Winter Fair Association, in the City of Guelph, Dec. 11th to 14th, was admittedly a decided success in most particulars. The management on the part of the officers was admirable, considering that the building was yet in an unfinished state, and the judging on the whole was creditable, though in some instances, as usual, there was cause for criticism. The new building erected on the market square, as the permanent home of the show, is a credit to the enterprise of the people of the Royal City. For convenience of location, in the interest of exhibitors and visitors, it is for the present all that could reasonably be desired, the only fear being that, large and commodious as is the new building, if the show continues to grow, as it is likely to do, both in entries of stock and attendance of visitors, more room will yet be required for its accommodation. To our mind, the best way to avoid that necessity will be to gradually make the exhibition what was originally intended, strictly a fat-stock show, eliminating the breeding and old cow classes, and by the offer of tempting prizes for steers, wethers and barrows, to encourage the preparation and exhibition of more high-class specimens of these of ideal type, and thus to secure for the show the reputation of being a model one in which quality rather than quantity shall be the distinguishing feature. While the best animals in nearly every section in the late show were first-class, and such as would do credit to any country, there were, it must be admitted, some in the cattle classes at least which were below the standard and should have no place in a show where uniformity of excellence in type and quality is the aim.

While in respect of numbers, as compared with the Chicago event of the previous week, the Canadian show looks circumscribed, and in that regard calls for a less lavish expenditure of superlative adjectives than has been indulged in by our contemporaries of the Chicago press in the attempted description of their show, it must be satisfactory to Canadian breeders and feeders to know that when it comes to a question of quality and finish of the best individual animals in cattle, sheep and hogs, Canada suffers not one jot in the comparison, but measures fully up to if not beyond the standard of the champions of the great Western show which has been so elaborately eulogized. The great want of this country is more of the same sort as the best we have, and that lack can only be removed by a more general effort on the part of the breeders and the farmers generally to produce and mature by generous feeding and care a better class of stock.

CATTLE.

The number of entries of cattle in the catalogue totalled 120, but some of these being duplicates, owing to being entered in more than one class, and a few being absentees, the actual exhibits probably numbered about one hundred head. The great majority of these were Shorthorns and grade Shorthorns, as has commonly been the case at former shows of the kind in Canada. The few Hereford, Aberdeen-Angus and Galloway cattle shown were of a good sort, and only required more feeding to bring them up to the mark of finished beefs. The judges of cattle were John T. Gibson, Danfield, and Robt. Miller, Stouffville.

Shorthorns.—A separate class was assigned to pure-bred Shorthorns, one-half the prize money being granted by the Dominion Shorthorn Breeders' Association. The entries in steers in this class were limited to very few, and there is room for more competition, which we hope to see greatly enlarged in the coming years.

In the section for steers two years old and under three, J. Fried & Sons, Roseville, supplied the winner in a substantial and well-finished son of Lord Willison, by imp. Indian Chief.

The yearling section furnished the best number in the Shorthorn class, in Israel Groff's white steer, named *Crimson Robe*, a son of *Golden Robe* = 20396 =, and of *Crimson Gem* = 20879 =, a youngster of fine character and quality, lengthy, level and well proportioned, with a strong loin, big quarters and thighs, a full twist, smoothly-laid shoulders, a thickly-fleshed back and fine handling quality of skin and hair. He was easily the champion of the Shorthorn class, although there were some other really good entries in it. The second prize in this section went to *Hermit*, a useful steer shown by Peter Stewart, Everton.

A strong class of five entries of cows three years and over was headed by *Matchless* of *Elmhurst* 18th, shown by W. J. Biggins, Clinton, a smooth, level, well-furnished red daughter of imp. *Royal Don* = 17105 =. Second place was given to *Dorothy Fox*, exhibited by Daniel Talbot, Everton. She was sired by *War Eagle*, by imp. *Warrior*. Third place was assigned to *Crimson Maid*, by *Recruiter*, by imp. *Hopeful*, exhibited by John Campbell, Woodville.

Fried & Sons had the winner in two-year-old heifers in a handsome and smooth red daughter of *Lord Willison*, and *Harry Smith, Hay*, supplied a popular winner in the section for heifers under two years, in the white twin, *Barmaid*, by *Abbotsford*, a thick, blocky heifer of excellent quality. *Barmaid* also won the sweepstakes for best Shorthorn cow or heifer in the show.

Herefords and Polled Angus were grouped together, and the winner for best steer or heifer two and over three years was the Hereford heifer, *Duchess of Moreton* 22nd, shown by the F. W. Stone Co., Guelph. *James Bowman* supplied the second winner, an Aberdeen-Angus, named *Elm Park Bell* 3rd, both being of good quality. The Stone Company had a choice winner in the yearling class in their *Graceful* 96th, a model of the breed, of fine type and quality. *Bowman's* tidy polled steer, *Elm Park Lad*, made an excellent second, and the same exhibitor had a good one for third place in *Bessie Blooming*.

In the section under a year, *Samuel Young, Binkham*, had a clear winner in *Springside Beauty*; the Stone Co. second with *Peach* 36th; and *Bowman* third with *Kyma* 10th. *A. McDougall, Guelph*, won fourth prize with *Rosie Bright*.

In the class for cow or heifer three years and over, *Bowman's* Aberdeen-Angus cow, *Kyma* 6th, was a popular first, and the same exhibitor had the third winner in *Lass of Tweedhill*; second going to the Stone Stock Co.'s Hereford, *May Day* 3rd.

Galloways and Devons were classed together, and the exhibitors were *D. McCrae, Guelph*, and *T. Lloyd-Jones & Son, Burford*, with *Galloways*, and *W. J. Rudd, Eden Mills*, with *Devons*, the latter winning second and third with smooth steers in the two-year-old class, not highly fitted; *McCrae* winning first with *Rainee* 13th, a typical Galloway heifer of fine quality. The same exhibitor had first and second winners in each of the other three sections of the class, with excellent specimens, the first-prize cow, *Semaramis* 29th, being especially level and full of quality.

Grades and Crosses.—It was in this class that the real plums of the cattle show were mainly found, several of the chief winners being virtually if not actually pure-bred Shorthorns, though ineligible to the Record, while most of the entries were excellent, and it would be well for Canada if we had many more like them. In the section for grade steers two years and under three, there were thirteen entries, nine of which filed an appearance, and an outstanding winner was found in the red "Clinker," calved in November, 1897; sired by *Moneyfuffel Lad*, shown by *James Leask, Greenbank*, and weighing 1,700 lbs. This steer was no stranger to fat-stock shows, having been exhibited annually since he was a calf, and so far as we remember, being unbeaten in his class. He is the model steer from the butcher's standpoint, carrying an extra wealth of meat on his back where the highest-priced cuts are found, his ribs being well sprung from the spine and thickly packed with high-class flesh, as are also his crops, loins and quarters. He is free from any indications of paunchiness, and presents the appearance of one likely to kill out with a low percentage of offal. Taken all in all, we doubt if a better of his age has ever been shown in Canada, and we are by no means persuaded that his equal in completeness of conformation and quality combined was seen at the Chicago Exposition. A capital second was found in *Fried's Look Out*, by *Lord Willison*, a red steer of fine character and type. The third ribbon went to a massive, deep-ribbed, fast-feeding farmer's steer, shown by *R. J. Robinson, Ailsa Craig*, that one could not but admire, though *Stewart's* red roan, *Candidate*, by *McTurk*, a smoother and better-backed beast, placed fourth, might well have stood a notch higher, and would have been in type more in line with the first and second winners. *Leask* had in his red *Rock*, by the same sire as *Clinker*, a clear winner in the yearling class, owing to his being well fitted more than to his having any special advantage in form or quality over his competitors. *Andrew Richardson, Peepabun*, had in his second-prize steer, *Iroquois*, by *Lord Stanley* 5th, a rich roan of fine character; while *J. H. Dingle, Hamilton*, showed *Roger Stanley*, sired by *Duncan Stanley*, that was a worthy third; and *General White*, a good one shown by *John Campbell, Woodville*, and sired by a son of *Indian Chief*, was placed fourth.

Jumbo, a handsome roan shown by *A. Hales, Guelph*, was the first-prize steer under a year. He has excellent form and quality, and shows good breeding as well as judicious feeding. *Richardson's* Bobs, by *Lord Stanley* 5th, a rich roan, made a fine show, and secured second prize; *Leask's Cronje*, by *Royal Banner*, being placed third; and *Geo. Clayton's Tom*, a handsome roan by *Gloster*, another of the sons of *Indian Chief*, filled fourth place creditably.

Jas. Bowman's Guelph Lass, a big, smooth, level cross-bred cow from Aberdeen-Angus sire and Shorthorn dam, was a popular winner in the class for cows over three years, though not in high condition, but her smoothness and levelness carried her to the front. *Wm. Argo, Eden Mills*, with a big fleshy cow, came in second; *John Brown, Galt*, third; and *Jas. Leask* fourth. The championship winner of the class was found in the section for heifers two years old and under three, in *James Leask's* great heifer, *Flo*, by *Moneyfuffel Lad*. She was easily first in her class, and was adjudged even a better beast than her stable chum, *Clinker*, being awarded the grand sweepstakes silver cup donated by *Mr. Thos. Holliday, Guelph*, for the best animal, any age or breed, in the cattle department of the show. She is certainly a marvellous heifer, combining quality, breed character and perfection of conformation in the highest degree. She is massive without a suspicion of coarseness, wonderful in the width of her crops and depth and spring of ribs, smooth and level in all her parts, standing on short

legs, and weighing close to 1,800 lbs. at a few days under three years of age. She is one among ten thousand, and it is doubtful whether she could have been downed by any female of any age in the breeding classes shown this year in all of America. She is certainly a high tribute to her great sire, *Moneyfuffel Lad*, three times a champion of Canada's greatest show, and is an evidence that the best bulls are not too good to get feeders for the fat-stock shows, an evidence too that the offspring of a matured sire are liable to prove his best, since though used for four seasons in one herd, and siring winners for years in the Provincial fat-stock shows, his last are clearly the best of the get of this grand bull. Second prize in the two-year-old section went to *Leask's Bess*, another superior daughter of *Moneyfuffel Lad*; third to *James Scott, Aberfoyle*; fourth to *Abram Ruddell, Hespeler*. In heifers under two years, *Fried & Sons* won first, *Leask* second, and *R. Dawson, Guelph*, third. The silver cup donated by the *Bell Organ & Piano Co.* of Guelph, for the best pair of fat animals of any age or breed, was won by *Mr. Leask's Clinker and Flo*. The sweepstakes for best animal, any age or breed, was won by *Leask's* two-year-old grade Shorthorn heifer, *Flo*.

Dressed Carcass Competition.—The special prizes for dressed carcasses in the Shorthorn class went first to *Fried & Sons' first-prize two-year-old steer, Wild Bill*; second to *Biggins' Matchless of Elmhurst, first-prize cow*; third to *Fairbairn's Maid of the Mist*. In the Hereford and Polled Angus class, first to *James Bowman's Angus*. In the Galloway and Devon class, first to *McCrae's Galloway cow, Semaramis* 28th; second to *Rudd's Devon steer*. The grand sweepstakes prize for best dressed carcass, any breed, went to *J. Fried & Sons, Roseville*, for the pure-bred Shorthorn two-year-old steer, *Wild Bill*, winner of first prize in the two-year-old class alive, where he had no competitors. Grades and cross-breeds were not allowed to compete in the carcass contest for the grand championship, a ruling which seems to be narrow and unfair. In such a class the competition should be open to all, so that the best may have a chance to win.

SWINE.

The classes for swine of the various breeds were in nearly all instances well filled, and generally with hogs of a good stamp, even when judged by a reasonably exacting bacon-type standard. So noticeable, indeed, is this feature that the unprejudiced observer is disposed to congratulate the breeders and exhibitors of hogs that are not considered as generally ranking as baconers on the decided improvement that has been made by judicious selection and intelligent feeding in bringing their hogs steadily nearer to the approved type, and it is not too much to claim that, considering the material they had to work with, quite as much improvement has been made in these classes as in any. Holding this opinion, we have but very limited sympathy with the packers who, by their deliveries, assume the right to boom certain breeds, to boycott others, and to tender advice and instruction upon a subject on which, judging from the numerous discrepancies in their opinions and judgment, it is clear they are themselves considerably at sea. For our own part, we are as strongly as ever of the opinion that the production of hogs conforming to the ideal bacon type is less a question of breeds than of careful selection, judicious mating, and intelligent management and feeding.

Berkshires were shown in fairly good numbers, and of excellent quality and character, by *George Green, Fairview*; *Snell & Lyons, Snelgrove*; *Durham & Cavan, East Toronto*; *James A. Russell, Precious Corners*; and *Robt. Agnew & Son, Acton*.

In barrows six and under nine months old, *Green* had the first and third prize winners, and *Durham & Cavan* the second. These were a good class, showing fine quality.

In barrows under six months, *Green* was first and second, and the *Snelgrove* entry third and fourth, all being typical animals.

For sows under 15 months and over nine, *Snell & Lyons* had a very captivating first in *Lady Shields*, a model of the approved type; *Green* winning second and third with *Artful Belle* and *Golden Drop*, of excellent stamp and quality.

In the section for sows six and under nine months, *Green* was first with *Model Queen*, a lengthy, well-balanced sow of excellent type. *Snell & Lyons* had in *Miss Prim* and *The Duchess* capital entries of similar stamp, large, lengthy and well fleshed, and which were placed second and third.

In sows under six months, the *Snelgrove* herd had the first and second winners in *Pleasant Maid* and *Lady Maid*, sisters, sired by *Col. Brant*, and of great length and strength of back and bone, and fine breed type. The third prize went to *Russell*, for *Black Polly*, a good sort, sired by *Cervera*.

For three pigs, the offspring of one sow, bred by the exhibitor, first went to *Snell & Lyons*, for *Morning Lily*, the *Duchess* and *Morning Maid*, and second to *Green*, for *Model Queen*, *Black Sam* and *Black Jack*.

In the sweepstakes contest for the best Berkshire any age, the two acting judges, *R. H. Harding* and *Wm. Jones*, differed, one voting for *Snell & Lyons' Lady Shields*, first-prize sow under fifteen months, the other for *Green's Model Queen*, first-prize sow under nine months, and *Major G. B. Hood* being called as referee, decided in favor of *Mr. Green's* entry.

In the contest for two best export bacon hogs, Berkshire, the judges, who were packers, awarded

the first prize to Snell & Lyons' entry, estimating them as under the weight limit of 220 lbs., but on a demand later for scale weights, they were found to be seven pounds over weight, and though of excellent quality, and filling the bill for bacon type admirably, were thrown out, and Green's entry, a capital pair, of much similar stamp, given first place: W. J. Rudd, Eden Mills, winning second, and J. A. Russell third.

Yorkshires were well represented in numbers and quality by Brethour & Saunders, Burford; J.

Tamworths were out in goodly numbers, and of generally good quality and type, and were shown by A. C. Hallman, New Dundee; Norman M. Blain, St. George; A. Elliot & Son, Galt; Andrew Elliot, Pond Mills; H. George & Sons, Crampton; W. M. & J. C. Smith, Fairfield Plains; J. R. Newell & Sons, Crampton, and W. R. McDonald, Ridgetown, each of whom got into the prize list more or less, and it was an honor to get any place in the winning circle among so many good ones. In the section for barrows six and under nine months, Blain scored first with Si, a good sort, and Elliot, of Pond Mills, with Sam, of similar stamp; Douglas & Sons third, Hallman fourth, and George fifth.

These were a strong class of typical baconers, carrying an excellent quality of flesh on well-packed backs. Barrows under six months were worthily headed by Hallman's entry, Surprise, by British King; second and fourth going to McDonald, and third to Blain. In the section for sows over nine and under fifteen months, Blain got into first place with his Thrifty Maid, a sow of fine type, that had raised a litter of pigs and was not in high condition, but showed good length of sides and quarters and good constitution. She was also awarded the championship of the breed, second and fourth prizes in the section going to Elliot, of Galt, and third to Smith. For sows over six months and under nine, Elliot, of Galt, got into first place with First Choice, a capital sort, the other Elliot coming in for second, Douglas third, and McDonald fourth. For sows under six months, Blain was first with Rosy O'Grady, and second with Fancy; Newell third, and Elliot, Galt, fourth. For best three offspring of one sow, the prizes went, first to Douglas & Son; second to Elliot, Pond Mills; third to Blain, fourth to Hallman. The prizes for export bacon hogs, Tamworth, went to Blain; Elliot & Son, Galt, and George & Sons, in the order named, all being excellent specimens.

Sweepstakes for best two export bacon hogs, any breed, Brethour & Saunders, Yorkshires, first; G. B. Hood, Yorkshires, second; Featherston & Son, Yorkshires, third; Blain, Tamworths, fourth; Elliot & Son, Galt, Tamworths, fifth.

Dressed Carcasses.—Berkshires—W. J. Rudd, Eden Mills, first; Snell & Lyons, second. Yorkshires—Brethour & Saunders first, G. B. Hood second, Brethour & Saunders third. Tamworths—Newell & Sons first, George & Sons second; Elliot & Son, Galt, third and fourth. Essex—Featherston & Son first and second. Grades and crosses—Rettie Bros. first; Elliot, Galt, second; George & Son third.

Sweepstakes.—Two best carcasses, any breed, Rettie Bros. first, Brethour & Saunders second, Newell & Sons third.

Grand sweepstakes, best pair swine carcasses, any breed, not yet decided. The judges reported first to Rettie Bros., Norwich, but they had not made entry. Brethour & Saunders are next in order.

SHEEP.

The changes in the sheep exhibit at the Ontario Provincial Fat Stock Show are not strongly marked in character from year to year. The personnel of the exhibitors changes slightly, but, as a rule, the strongest exhibitors appear year after year with their particular class of stock, brought out in the same tiptop condition. This year there were 28 exhibitors, with 346 entries in all, as against 24 exhibitors and 307 entries in 1899. Last year there were four exhibitors that did not come this year, and at the show just past there were ten—mostly new faces—that did not exhibit in 1899. Several other showmen had prepared flocks to bring out, but the Chicago event attracted them and prevented them coming to Guelph.

Cotswolds.—Last year there were five exhibitors of this generally useful and handsome breed—this year only one: Messrs. John Park & Son, Burgessville, Ont., who had forward a dozen choice representatives, brought out in fine form for a vigorous tussle. It must have caused a feeling of disappointment to be deprived of competition under such circumstances.

Lincolns.—The firm name of Gibson & Walker has been annually associated with this show for many years. This year, Mr. J. T. Gibson, Denfield, was out alone, the partnership having been dissolved. The flock does not appear to have suffered, however, as its members seldom, if ever, appeared better than on this occasion. Mr. Gibson's only competitor was Mr. L. Parkinson, Eramosa, who also had a well-fitted, good lot, on which he won 2nd on wether lamb, 2nd on three wether lambs, 2nd and 3rd on three ewe lambs, and 1st on dressed lamb carcass. Mr. Gibson won all the other awards offered for this breed. Mr. Gibson's yearling wether won the sweepstakes award.

Leicesters.—The competition was keen in this class, the exhibitors being Messrs. A. & W. Whitelaw, Guelph; Orr & Lillico, Galt, and John Kelly, Shakespeare. The ewe lamb section was particularly strong, all the exhibitors competing, with eleven beautiful, even entries in all. Messrs. Whitelaw won 1st and 3rd, and John Kelly 2nd. Orr & Lillico won all the 1sts in wethers and in dressed carcasses. The breed sweepstakes was won by Messrs. Whitelaw's ewe lamb.

Oxfords are showing decided improvement, both in numbers and in mutton quality. The exhibitors this year were Messrs. Smith Evans, Gourock; Kenneth Findlayson, Campbellton; J. H. Jull, Mt. Vernon, and Andrew Elliott, Pond Mills. There were fourteen entries of ewe lambs, and a choice lot of nice-handling, well-grown specimens they were.



BRAVE ARCHER (70018).

The \$6,000 Shorthorn bull bred by Mr. Duthie, Collynie, Aberdeenshire.

IMPORTED IN 1900 AND OWNED BY MR. E. S. KELLY, YELLOW SPRINGS, OHIO.

Featherston & Son, Streetsville; J. A. Russell, Precious Corners; and H. Dedles, Breslau.

In barrows, six and under nine months, Brethour & Saunders had first and third prize winners, of approved type, and Dedles a very good second. The Burford herd scored again first and third for barrows under six months, Featherston getting into second place. These were all of a good class. Brethour & Saunders had a very popular first in the section for sows under fifteen and over nine months, in Oak Lodge Julia, a typical Improved Yorkshire of capital character, lengthy, well fleshed, with well-sprung ribs, smooth shoulders and well-filled hams. Featherston had a good strong, well-balanced sow for second, in Whiston Maid; and Dedles a smooth sow of nice character, presenting a fine side view, but wanting in spring of ribs and in packing of flesh on loins and back, which doubtless accounts for her being relegated to third place.

In sows six and under nine months, first went to J. B. McDonald, Muirkirk; second and third to Brethour & Saunders.

For sows under six months, Brethour & Saunders had first and third, and Dedles second and fourth, with excellent entries all; while for three pigs, offspring of one sow, the Burford entries were first and second, and Dedles third.

The sweepstakes prize for best Yorkshire any age was worthily won by Brethour & Saunders' Oak Lodge Julia, first-prize sow under 15 months, a model of the breed and hard to beat in any country. In the competition for best two export bacon hogs, Yorkshire, Brethour & Saunders had the first-prize pair, G. B. Hood second, J. Featherston & Son third. For the best two export bacon hogs, Brethour & Saunders won first, G. B. Hood second, Featherston third.

Chester Whites were shown by W. E. Wright, Glanworth; D. DeCourcey, Bornholm; Bennet & Pardo, Charing Cross; H. George & Sons, Crampton; and John Silverthorn, Scotland, Ont. In type and quality the exhibits in this class were, with very few exceptions, of a high order of merit, showing care and good judgment in breeding and feeding them with a view to conforming to the approved bacon type, in which the breeders have succeeded to a very creditable degree. The Chesters here shown being a very great improvement on those shown at the late Chicago Show.

Bennet & Pardo were successful in winning first and second with barrows six months old and under nine months, DeCourcey having the third winner.

For barrows under six months, the record was reversed, DeCourcey winning first and second, and Bennet & Pardo third and fourth. For sows nine months and under fifteen, George & Son had the first place, with DeCourcey second, and the Charing Cross firm third. In sows six months and under nine, George & Sons were again first, DeCourcey second, Silverthorn third and fourth. In the section for sows under six months, the order was Bennett & Pardo first, George second, and DeCourcey third. For the best three pigs, offspring of one sow, DeCourcey was first, Bennett & Pardo second. And for sweepstakes for best hog in the class, George's first-prize sow under fifteen months was declared the winner. In the competition for best pair export bacon hogs, Chester, Wright scored first; R. H. Harding, Thorndale, second, and DeCourcey third, all being good lots.

Blain was first with Rosy O'Grady, and second with Fancy; Newell third, and Elliot, Galt, fourth. For best three offspring of one sow, the prizes went, first to Douglas & Son; second to Elliot, Pond Mills; third to Blain, fourth to Hallman. The prizes for export bacon hogs, Tamworth, went to Blain; Elliot & Son, Galt, and George & Sons, in the order named, all being excellent specimens.

Duroc-Jerseys were exhibited by W. N. Tape, Bentpath, who showed some excellent entries of good length and smoothness, while some others were rather on the short order, with too fat backs, but his entry for export bacon hogs was made up of pigs of good type and not overfat. The prizes in the class were nearly all awarded to Mr. Tape.

Poland-Chinas were entered only by W. M. & J. C. Smith, Fairfield Plains, who had out some of very good stamp, showing fair length and smoothness. They were awarded the bulk of the prizes.

Essex were well shown by J. Featherston & Son, Streetsville, and T. A. McClure, who divided the prizes and showed a good class of pigs of good length and smoothness and conforming well to approved bacon type.

Grades and Crosses.—A strong show was made in each section of this class, the first prize in barrows six and under nine months going to Agnew & Son, Acton. In barrows under six months, to Agnew; Elliot, of Galt, and Blain. In sows under



CLINKER.

FLO.

Sweepstakes grade steer, and first-prize grade heifer (the champion over all), Provincial Winter Fair, Guelph, 1900.

BRED AND FED BY JAMES LEASK, GREENBANK, ONT.

nine months, Blain, McDonald, and Elliot. Sows under six months, Snell & Lyons, Agnew, and Elliot. Export bacon hogs, Green, with Berkshire grades, first; Rudd second, Russell third, Snell & Lyons fourth.

Findlayson won 1st on a March lamb; Evans 2nd on one dropped in February, and Elliott 3rd on a March product. Elliott showed alone in shearing wethers, and Evans won all the money prizes in wether lambs except 2nd for three under a year,

won by Elliott. Elliott won in dressed shearing wether and on dressed wether lamb, Evans being second. Mr. Jull won 3rd on three ewes under a year, 1st going to Finlayson and 2nd to Evans.

Shropshires.—There is always a keen battle in this breed at the Provincial Winter Fair, and first-rate sheep have to be left out of the winnings. Would it not be money well spent were the Shropshire Breeders' Association to make up some specials, increasing the number of prizes in the regular classes? The exhibitors of this breed were John Campbell, Woodville; Richard Gibson, Delaware; D. G. & J. G. Hamner, Mt. Vernon; W. H. Beattie, Wilton Grove; T. Lloyd-Jones & Son, Burford; W. E. Wright, Glanworth, and Abram Rudell, Hespeler, Ont. The exhibits of Messrs. Campbell, Hamner and Gibson had arrived from their successful campaign at the great international competition the previous week. Their trip abroad evidently did them no harm, as they walked out in the finest of form, sprightly and proud, seemingly conscious of their superiority. As on previous occasions, Campbell led in ewe lambs and Gibson in wethers of the same age, with Messrs. Hamner and Wright following next in order. Campbell also won 1st and 2nd in shearing wethers, and made a worthy effort for the breed sweepstakes, but Mr. Gibson's lamb, King of the Show, was too much for him in a tussle of this sort, as he was not only a very choice lamb throughout, but was particularly well covered on the back and down his quarters. For 3 wethers under a year, Gibson was 1st and 2nd, and Wright 3rd. In the block test, T. Lloyd-Jones & Son's shearing wether, that was unplaced alive, defeated Campbell's 2nd prize sheep that won 3rd dressed, an entry of Messrs. Hamner's coming between them. A number of specials were given by the Shropshire Breeders' Association for wethers, pure-bred; also wethers from grade ewes and registered sires, and for pen of three pure-bred ram lambs. In shearing and lamb wethers, the prizes went as in the open class. The ram lamb awards went 1st and 2nd to Campbell, and 3rd to Messrs. Hamner. There were five trios in competition, and a choice lot they were. The specials for grade gets of Shropshire rams settled on sheep of choice mutton merit possessing much Shropshire breed type.

Southdowns.—The names of Jackson, Douglas

and Telfer have become intimately associated with this class of sheep. Others that showed here were the newcomers, Hon. Geo. A. Drummond, Beaconsfield, Que., and Robt. McEwen, Byron; besides W. E. Wright, W. H. Beattie, Wm. Martin, and Messrs. Orr & Lillico. There was a big entry, and the awards were well disseminated. Messrs. John Jackson & Son won the best awards in ewe lambs, followed by McEwen and Martin. In yearling wethers, W. E. Wright won on Perfection, the sweepstakes winner of the breed alive; Telfer Bros. winning 2nd, and Hon. G. A. Drummond 3rd; whereas in wether lambs the prizes went 1st to T. C. Douglas and 2nd and 3rd to Jackson & Sons. When the carcasses came to be judged, Wright's sweepstakes yearling wether was given 2nd place after Telfer's 2nd-prize sheep shown alive, the 3rd going to W. H. Beattie in dressed lambs. The same inconsistency occurred in wether lambs, when a lamb unplaced alive won 1st here, and the 2nd-prize lamb alive also won 2nd here, the 3rd going to Douglas' 1st-prize live winner.

Dorsets.—Mr. R. H. Harding, Thorndale, had it much his own way here, as his only competitor was W. E. Wright, with one shearing wether bred by Harding. This sheep won 1st, however, he evidently having been rushed a little harder in the fitting process. All the entries were in good killing form, however, quite thick enough for Christmas mutton.

Hampshires and Suffolks showed together and divided honors. John Kelly showed a Hampshire ewe lamb and won 1st prize, also sweepstakes. There were four shearing Suffolk wethers shown, with divided honors, by Jas. Bowman, Guelph, and W. J. Rudd, Eden Mills. When dressed they presented choice, thick, well-marbled carcasses.

Grades and Crosses.—This class was the largest in the sheep show, and had a prize for nearly all the breeds and exhibitors. It was also famous for furnishing the sweepstakes carcass over all breeds, in John Campbell's yearling wether, that won 1st in his class alive, also 1st and sweepstakes in Chicago. When shown alive for sweepstakes in Guelph he was placed second to the sheep that stood below him in the regular class. The gets of Shropshire rams made a good showing here, inasmuch as the 1st prizes for shearing ewe, shearing wether, wether lamb, pen of three wether lambs, and year-

ling dressed carcass, as well as a number of 2nd awards, were won by Shropshire grades. R. H. Harding showed a grand lamb possessing Dorset blood, on which he won 1st in both alive and dressed sections. The best ewe or wether under two years was found in W. E. Wright's shearing wether, a sheep that handled and showed well, but carried a bit too much fat to suit the butchers. In the dressed competition he took 3rd money.

Judges.—Shropshires, Southdowns and Dorsets were judged by Jas. Tolton, Walkerton; the Ox-fords, Suffolks and Hampshires by Henry Arkell, Arkell; Cotswolds, Leicesters and Lincolns by Wm. McIntosh, Burgoyne; grades and crosses by Wm. Rae (Arkell), Wm. A. Arkell (Teeswater), James Tolton, and J. G. Hamner (Burford). Dressed carcasses were pronounced upon by Jas. Tyson, Guelph, and H. A. Foulds, Brantford.

THE DAIRY TEST.

The two-days dairy test for the 1900 show promised to be of exceptional interest and value, since it had the double purpose of showing not only the productive capacity of cows in milk and in butter, but also the cost of that production in food consumed. Below we give a table showing the results of the test in milk and butter, also the amount and cost of food eaten by each cow to produce it. The foods were valued per ton as follows:

Ensilage	\$ 2 00
Bran	14 00
Ground oil cake	25 00
Corn meal	18 00
Pea meal	20 00
Hay, timothy	11 00
Hay, clover	11 00
Cotton-seed meal	28 00
Corn fodder, cut	6 00
Ground oats	18 00
Carrots	6 00
Roots (except carrots)	4 00
Shorts or middlings	16 00

It will be noticed that the cows were very unevenly fed. In one case, for instance, the Short-horn, Roan Blanche, was fed up to her limit, while several of the others were given a low, cheap diet, so as to show a low cost of production. The food test, therefore, cannot be taken as any guide as to the actual requirements of these cows to produce a continuous full flow of milk. The table follows:

NAME OF COW AND OWNER'S ADDRESS.	Total pounds of milk in 48 hours.	Fat.	Solids not fat.	No. of points for fat.	No. of points for solids not fat.	Points for days in milk.	Total points.	Cost of food for 48 hrs. Average of 7 1/2 days' feeding.	Cost of food for 100 points.	1st Test.			2nd Test.			3rd Test.			Lbs. of food consumed by each Cow for 7 1/2 days.							
										Milk.	Per cent. fat test.	Amount of fat.	Milk.	Per cent. fat test.	Amount of fat.	Milk.	Per cent. fat test.	Amount of fat.	Clover hay.	Turnips.	Ground oil cake.	Pea meal.	Ground oats.	Ensilage.	Bran.	Herbage.
										lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
SHORTHORN COW, 36 MONTHS AND OVER.																										
1st—A. W. Smith, Maple Lodge—Roan Blanche 25854	102.13	3.43	9.47	68.64	37.88			106.52	53.2	50.19	31.7	3.	1.04	33.37	3.5	1.2	31.06	3.5	1.192	26.5	20.7	13.	24.5	15.	235.	48.5
AYRSHIRE COW, 36 MONTHS AND OVER.																										
1st—N. Dymont, Clappison's Corners—Briery Banks Cora 2846	94.03	3.46	8.31	69.20	33.24	1.3	103.74	29.9	28.8	31.06	3.8	1.18	31.37	3.8	1.12	31.6	3.7	1.16	5.5	43.5	16.5	15.	15.	232.	34.	
2nd—N. Dymont, Clappison's Corners—Nellie Gray 2057	56.19	2.14	4.84	42.8	19.34	10.	72.16	29.3	40.6	17.75	3.6	.61	19.17	4.	.78	18.97	3.8	.72	5.	31.	16.5	14.5	14.	236.	35.5	
3rd—Wm. Stewart & Son, Menie—Jean Armour 2158	58.49	2.22	5.30	41.56	21.20	10.	75.76	33.1	43.6	19.7	4.	.79	19.87	3.8	.75	18.12	3.8	.68		73.5	12.	11.	34.	280.	26.	.33
4th—N. Dymont, Clappison's Corners, Briery Banks Susie 2847	48.77	1.8	4.32	36.10	17.28	10.	63.38	27.7	43.7	16.	3.8	.61	16.4	3.6	.59	16.37	3.7	.60	5.5	25.5	11.	11.	14.	290.	38.	
5th—Wm. Stewart & Son, Menie—Sprightly 1210	58.81	2.35	5.59	47.12	22.36	.5	69.48	33.	47.5	20.6	4.2	.87	19.81	3.8	.75	18.1	4.	.73		71.	12.	11.	34.	280.	26.	.33
AYRSHIRE COW, UNDER 36 MONTHS.																										
1st—W. M. & J. C. Smith, Fairfield Plains—Gurta Osborne 9066	49.12	1.98	4.61	39.64	18.44	6.8	64.88	21.8	33.6	16.3	4.	.65	16.6	4.2	.70	16.22	3.9	.63	8.	9.	1.5	4.	18.5	298.	31.	
2nd—W. M. & J. C. Smith, Fairfield Plains—Angeline 9068	47.09	1.88	4.32	37.60	17.28	7.6	62.48	21.7	34.7	15.6	4.	.62	15.87	3.9	.62	15.62	4.1	.61	8.	9.	1.5	4.	18.5	291.	31.	
3rd—N. Dymont, Clappison's Corners—Briery Banks Lola 9300	46.93	1.63	4.28	32.76	17.12	6.4	56.28	28.3	50.3	15.5	3.3	.51	15.9	3.8	.60	15.33	3.4	.52	6.5	36.5	14.5	10.	14.	246.	39.5	
4th—Wm. Stewart & Son, Menie—May Mitchell 9237	41.27	1.44	4.12	28.80	16.48	10.	55.28	28.6	51.7	14.65	3.3	.48	14.12	3.6	.51	12.5	3.6	.45		63.5	12.	11.	30.	206.	21.	.33
HOLSTEIN COW, 36 MONTHS AND OVER.																										
1st—Rettie Bros., Norwich—Highland Cornelia 2529	91.94	2.85	7.74	57.	30.96	8.4	96.36	19.3	20.0	30.2	3.	.91	31.4	3.1	.97	30.34	3.2	.97								
2nd—Rettie Bros., Norwich—Aaltje Posch 4th 65	114.67	4.28	10.81	85.6	43.24		128.81	29.2	22.6	39.37	4.	1.57	37.8	3.6	1.96	37.5	3.6	1.35	5.	12.	13.	22.	1.	277.	51.	
HOLSTEIN COW, UNDER 36 MONTHS.																										
1st—Rettie Bros., Norwich—Artis Mink Mercedes 1942	86.60	2.5	6.90	50.18	27.6	2.1	79.88	19.2	21.0	27.8	3.	.83	29.15	2.8	.82	29.65	3.	.86					9.	4.	283.	39.
2nd—Rettie Bros., Norwich—Alta Posch 2343	84.51	2.45	7.54	49.	30.16		79.16	21.8	27.5	28.3	2.6	.74	28.96	3.1	.87	28.15	3.	.84					11.	11.	287.	37.5
GRADE COW, 36 MONTHS AND OVER.																										
1st—A. McDougal, Guelph—Utopia	101.27	3.38	8.80	67.7	35.2	.6	103.5	36.	31.7	33.93	3.3	1.12	36.	3.4	1.2	31.31	3.4	1.06	24.5	10.6	2.	23.5	52.	240.		

(For report of addresses by experts at Fat Stock and Dairy Show, see page 12.)

The Smithfield Champions.

The championship for the best beast alive at the Smithfield this year went to Mr. John Wortley's two-year-old Hereford steer, Lord Roberts, and the reserve number was Mr. Learner's cross-bred heifer, Ladysmith. At the Birmingham Show Her Majesty the Queen's Shorthorn heifer, Cicely, won over Lord Roberts, and the Smithfield decision was a reversal of that judgment. Cicely was adjudged the best Shorthorn at the latter event, capturing the breed cup, and the reserve was Earl of Roseberry's two-year-old steer, Talisman. The champion Aberdeen-Angus was Mr. Geo. Bruce's yearling steer, Cock of the North, and the champion Galloway, Sir John Swinburne's Scotch Queen 3rd. The champion plate for the best pen of three

long-wooled sheep or lambs went to Mr. John Pears' Lincoln yearling wethers, an extraordinary pen, whose weight averaged 377 lbs., and their daily gain was 9.12 ozs. The reserve number was Mr. Dudding's pen of lambs. The champion plate for the best three short-wooled sheep went to the Earl of Ellesmere's pen of yearling Suffolk wethers, and the same pen won the Prince of Wales' challenge cup for the best three sheep or lambs bred by the exhibitor, the reserve pen being Mr. Pears' yearling Lincolns.

The breed cups for the best pen of sheep of each breed were awarded as follows: Leicesters, E. F. Jordan; Border Leicesters, Earl of Roseberry; Cotswolds, F. Craddock; Lincolns, J. Pears; Southdowns, Duke of Richmond and Gordon; Hampshires, Thomas Powell Buxton; Suffolks, Earl of

Ellesmere; Shropshires, Philo L. Mills; Ox-fords, H. W. Stilgoe; Dorsets, J. Toop.

The champion plate for best pen of two pigs went to R. Fowler's Berkshires. For the best single pig, to Earl of Roseberry's Large Whites (Yorkshire); reserve to N. Benjafield's Berkshires. The Duke of York's challenge cup for best two pigs bred by exhibitor, to R. Fowler's Berkshires, reserve to Earl of Roseberry's Yorkshires.

JOHN DICKIN, Milton, Ont.: "I write to congratulate you upon the publication of your Christmas number. It amazes me to see you produce such a publication for the price we pay. The Christmas number, and the FARMER'S ADVOCATE throughout the year, is superior to any other publication I have ever met with."

The Dairy Situation in Manitoba.

To the Editor FARMER'S ADVOCATE:

I have read your article on "The Dairy Industry in Manitoba," and must say that it states my sentiments exactly; in short, you have hit the nail on the head. For my part, I think the butter and cheese makers were a little too hasty in doing as they did; if they had tried more in the Dairy Association to rectify errors first—before organizing—they would have more sympathy; but there is certainly no room for two associations, and they had better act on your suggestion now, if they desire co-operation instead of opposition.

D. W. McCUAIG, Manager.

Macdonald Creamery.

To the Editor FARMER'S ADVOCATE:

Your article on "The Dairy Situation in Manitoba" on the whole is good, and deserves the earnest consideration of every man, woman and child in Manitoba who is interested in dairying. Are you not wrong, though, in saying that, "Aided by money grants from the Provincial Government, creameries and cheese factories were started all over the country"? I think so, for as far as I am aware, there were no grants made. True, there was a loan in quite a few instances, which, if not already paid back, will have to be, with interest accrued thereon. Again, you say that even in districts which are suitable for dairying the industry has not progressed as it should have done, and, to my mind, a word of encouragement right there would have been wise, for, considering that there has been no assistance other than the loan above referred to, what better progress could be looked for than that made in the Pilot Mound and Newdale districts, and that, too, without instructions from any source.

As to any suggestions from me as to the advancement of dairying and dairy instruction, I think it wise at the present time to "say nothing, but say wood," for, as we are all well aware, there is quite a lot being said just now, and in it all how much can we find that has for its object the benefit of the producer—the very one who, among all concerned, most needs and deserves assistance and encouragement?

A. R. FANNING, Manager.

Newdale Creamery.

To the Editor FARMER'S ADVOCATE:

I have had no dealings with commission men for the last two years. We have been able to sell quite readily all our make, all we could make, to men in British Columbia, doing away with commission men altogether. Before that time we had some dealings with commission men, but it did not prove very satisfactory. I do not know anything about cheese, nor do I know how it is disposed of. As far as the quality of the butter made in Manitoba goes, I have not heard anything very wrong with it. As for our own make, we have lots of men in British Columbia willing to take our word that the goods are A1, and for the two years that I have been managing the Copenhagen Creamery I have yet to hear of one dissatisfied customer, either from short weights, mold, off flavor, or any other cause. Now, in regard to dairy associations, dairy schools, dairy institutes, etc., etc.: First, I think that you are quite right when you say the two should amalgamate. There is no use of trying to run the two, and I, for one, will do all I can to bring that about. Perhaps the old dairy association, as you call it, has not done what it should; but we might quote Burns, who says: If we could see ourselves as others see us, and so on, we might have done better; however, I think this will be the means of stirring us up. I think the dairy school is much needed, and is doing good work under both the former and present superintendents, and I think it should be continued, because we need all the assistance, from whatever source it may come, to bring the farmers to see that the dairying industry is going to rank first in Manitoba in the near future. Dairy instructors' traveling dairies, I believe, are a good thing. I know that a few years ago the traveling dairy under Prof. Robertson, that went through this country, did a lot of good, and was the means of starting quite a few thinking. In conclusion, I might say I do not know why the promoters of the new association should be dissatisfied, as I have been in attendance at every annual meeting of the Dairy Association for quite a few years, and I do not remember seeing the President of the new association there, except once, and then only for a short time, and I do not remember any suggestions that he brought forward then to improve the work of the Association.

W. B. GILROY, Manager.

Creamery, Austin.

GENTLEMEN,—I have been greatly enlightened and have much enjoyed your journal, as it has been a source of valuable information to me. Your Christmas number is just at hand. I consider it one of the finest numbers in my collection of agricultural journals received this year. You have displayed great taste in your selections and groupings. It is full of valuable information, and a friend to both farmer and breeder. Enclosed find draft for \$1.00, and kindly send me four copies of same, as I wish to send them where they will do much good.

Jno. W. SCOTT, Austin, Minn.

Fall Grain Exhibitions.

Now that so many of the agricultural fairs are held in the summer months, when an exhibit of grains is not possible, it does seem a most commendable thing to have competitive exhibits of grains and grass seeds at a time when all may have an opportunity of showing their best products, for, after all, wheat is, and will be for many years, the great staple product of the West, and agricultural societies that do nothing to encourage improvement in the quality of our great cereal crops fail very largely in their duty.

At Wolseley, on December 8th, was held the annual grain show of the East Assiniboia Union Agricultural Exhibition, and while the average quality of the exhibits was not up to standard, owing to the unfavorable harvest conditions, still, it is reported that the samples winning first premiums were really of excellent quality. Mr. Angus McKay, Superintendent Indian Head Experimental Farm, acted as judge. Below is a list of the prize-winners:

Special prize, \$25, for best 10 bushels red Fife—Donald Campbell.

Best 2 bushels red Fife—1st, Donald Campbell; 2nd, Wm. Biesly, Jr.; 3rd, W. Biesly, Sr.

Two bushels white oats—1st, G. A. Hewson; 2nd, G. P. Gardner; 3rd, Wm. Sharp.

Two bushels black oats—Wm. Dixon.

Best 2 bushels barley—1st, Wm. Dixon; 2nd, H. Edwards; 3rd, C. Thompson.

Brome grass seed—Wm. Sharp.

At Gladstone, at the time of the annual meeting of the Agricultural Society of Westbourne, on December 10th, a grain exhibit was held, at which the following were the successful competitors:

Red Fife—1st, D. McCaskill; 2nd, A. West; 3rd, J. A. Broadfoot.

Collection of grain—1st, G. Grantham; 2nd, A. H. Rogers.

White oats—1st, D. McCaskill.

Black oats—1st, J. M. Jamieson.

Six-row barley—1st, J. M. Jamieson; 2nd, G. Grantham.

Two-row barley—1st, W. H. Phillips; 2nd, A. West.

Peas—1st, G. Grantham; 2nd, J. H. Grantham.

Corn—1st, A. H. Rogers.

Brome grass—1st, A. H. Rogers; 2nd, W. C. Murdin.

Flax—1st, W. H. Phillips.

Other agricultural societies holding summer fairs would do well to provide for a grain exhibition in the fall, say in December, at the time of the regular annual meeting. In some sections it might be advisable to hold it earlier, and combine with it a root and vegetable exhibit, or in others it might be possible to make a good showing of fat poultry dressed for shipment, or any other feature worthy of special encouragement in the particular locality.

Judging at the Fairs.

(FROM OUR ONTARIO AND EASTERN EDITION.)

To the Editor FARMER'S ADVOCATE:

DEAR SIR,—It was with much interest and some amusement that I read in your valuable paper the articles under the above heading, but which, I think, might just as appropriately have been headed "Misjudging the Judges," for in most instances the criticising is done by men who do not even lay a hand on the animals, and pass their judgment and criticism entirely on outside appearance, which often is very deceiving, more especially so in the dairy breeds, and I fully believe that if these same critics were placed in the judge's position they would often be like a captain with his ship on the ocean without a compass. But of all, friend Rice's (in your Nov. 15th issue) "The Way Out" is the most erroneous, when he says there is only one rational way of judging dairy cows, and that is by the scales, Babcock and lactometer test. This reads very nice in theory, but let us look at it from the practical side. For example, we take two cows. No. 1 possesses typical breed characteristics, symmetrical form, with a well-formed and well-placed, capacious udder, giving, say 68 pounds of milk daily; while cow No. 2 is almost the very opposite in conformation, has a very unevenly-balanced udder, but her owner is an expert and skilled feeder, and can make her give 70 pounds daily, and, according to Mr. Rice's theory, she must get first prize, just because the scales show that she gives 2 pounds more milk daily, taking it that the milk be the same quality. Would this lead to the improvement of breed and breed type? And which of the two types would be the most desirable to perpetuate and to breed from? What would the reporters and Mr. Rice say of the judge who awarded the prizes in that way? I swear he would be pronounced an idiot. It is true that handsome is that handsome does, but much more valuable is that which is handsome and does handsome. The scales, Babcock and lactometer have their special place to decide which is the best cow, and this is in the dairy tests; there and only there it is right to rate the cows according to their production. But, in my opinion, the mission of the fall fair is, to a certain extent, a different one: it is to bring before the spectators, as an object lesson, animals possessing in the greatest degree the most desirable

and typical points of that breed, combined with the indications of large production. It is true that glaring mistakes are made through the incapability of the judges, but this does not prove the method wrong. Mr. Rice's criticism on my work at London I will, on the whole, pass unnoticed, but will, just for his benefit, tell him that I know it to be a fact that even the owner of the two cows in question does not agree with him in this very case.

Oxford Co., Ont.

H. BOLLERT.

Lessons from the Winter Fairs.

The undeniable success attending the live-stock shows held last month at Chicago and Guelph goes to show that, as an educational institution for farmers and farmers' sons, the winter fair, well managed, may be made a potent power for good in demonstrating the advantage which good breeding brings to the feeder of meat-producing animals. It also affords useful and helpful lessons on methods and means of feeding economically and to good purpose. Millions of money is now wasted in unintelligent and random feeding, feeding irregularly, allowing animals at some periods of their life to run down in condition, requiring double expense to bring them back to their former state of thrift; feeding concentrated foods of high money value, the tendency of which when fed alone or in improper combinations is to produce cheap-selling products; feeding past the point where the most profitable gains are made and the best quality of meat put on. These are all points which, especially when a well-directed slaughter test is associated, are brought clearly before the people and afford useful practical lessons by which all may profit. But the slaughter test will never do its best work until the rules require and the amount of the prize money offered justifies the killing of the prize-winners, so that comparison of the living animal with the dressed carcass of the same may be made. This, we admit, may be too much to expect in the case of young animals which their owners may be desirous of carrying over to compete in an older class the following year, but there is no good reason why the winners that have reached the age limit should not prove their claim to their honors by dying well—if it be in them to do so. By the ruling of the management of the Guelph Show (for what reason is not revealed) there was no inducement to kill the best animals in the cattle classes, since the grades, in which the grand champion was found in life, as is usually the case, were not allowed in the sweepstakes dressed-carcass competition. We see no justification for a ruling which denies the right of the best to win in such a class, for whatever virtue may attach to a registered pedigree in breeding animals, all should surely stand on common ground in the slaughter test for championship honors. In order to make the winter fair just what it was originally intended to be, a show of stock prepared or in preparation for the butcher's block, we submit that greater encouragement should be given for the exhibition of that class of stock by the offering of substantial money prizes sufficient to make it an object to prepare for such competition. The best animals that are brought out are certainly creditable, but were more tempting inducements offered there would doubtless be much larger competition, and there may be many diamonds in the rough which, if developed by skilful preparation, might shine as jewels in these shows. The Dominion Shorthorn Breeders' Association could make no better disposition of a liberal share of its surplus than by the offer of big prizes for steers, both in the pure-bred and grade classes, for the progeny of registered sires; and if the breeders of beef cattle of other breeds are ever going to make a display in these shows in Canada worthy of their class, they need to bestir themselves and by some means finance it so as to provide more generous prizes as an incentive. The success of the Blacks and the Whitefaces at Chicago in capturing championship and other high-class honors gives them a claim as beef producers which cannot be gainsaid, and it is not the first time they have come to the top in American shows, while in the Old Country they frequently divide the honors with the Shorthorns in a series of years.

In the sheep and swine departments of the Winter Fair the breeders are doing good work and make a grand showing, but even in these the prizes are too small to make it a sufficient inducement to use the knife freely and to prepare wethers and barrows in larger numbers and of ideal quality. The level-headed business men on the Boards of the Winter Fair and the various Breeders' Associations, it would seem, ought to find ways and means to hang up a better prize list than we have yet had, and the Government grants may well be increased if necessary in promoting an industry such as this, where the competition is open to all on equal terms and the interest is one on which the prosperity of the country so largely depends. We shall be prepared to find that in the near future the new building at Guelph will prove too small for a fat-stock and dairy show combined, and that the result will be the inception of a separate show for dairy cattle at some other date, and that both may prove highly successful in developing the industries they are associated with and which are of paramount importance, since to live stock and its products this country must look for its best returns.

Addresses at the Fat Stock and Dairy Show.

The lecture room in the new Winter Fair building at Guelph was kept occupied with audiences eager for information much of the week of the Fat Stock and Dairy Show. The room has seating capacity for from four hundred to five hundred people, and on very many occasions the doors had to be closed, shutting out many who were anxious to hear what was being said by the speakers.

SESSION OF INSTITUTE WORKERS.

Superintendent G. C. Creelman took occasion to have as many as possible of Farmers' Institute workers and members meet here and at the Experimental Union, in order that they may gather the lessons to be learned at the various sessions. It is estimated that about 15,000 Institute men took advantage of the cheap railroad rates and favorable admission arrangement. Institutes that contributed five dollars to the fair were allowed free admission of all their members to the show.

Hon. John Dryden, Dr. Jas. Mills and Mr. Creelman addressed a full meeting of workers at considerable length, giving them much valuable information and sound advice on the conduct of meetings. Hon. Mr. Dryden gave the men encouragement by referring to the great improvement he can see throughout the country in the character of the buildings, the feeding of animals and the care of implements, largely the result of the teaching given by the Institute workers. A few farmers are led to follow the advice given by delegates, and other farmers follow their example. In this way advanced and more profitable methods are extending and widening. The valuable influence of the travelling dairy was referred to, and its good effects will go on through many years. Many useful suggestions were made to speakers going out. They were advised to adapt their addresses to the needs of the localities they were in; to remember that country audiences are sharp critics and possessed of higher intelligence than some who may wear finer clothes; and to talk hard sense instead of attempting to entertain the people. An occasional story may serve a useful purpose, but they cannot take the place of useful information. What is needed is to assist people to devise means of providing more produce of a better quality.

Dr. James Mills urged the men to be practical, pointing out the weaknesses seen to exist in farming methods. The speakers were urged to talk only what they know from experience. After Dr. Mills had concluded, several Institute speakers followed with pithy addresses that gave the occasion something of the nature of an experience meeting.

The presentation was then made to Dr. Mills, of some six hundred dollars contributed by members of Farmers' Institutes and other friends. It was intended that this should have taken place in June, when the Doctor really received the money, to enable himself and Mrs. Mills to take a trip to Europe. Dr. Mills feelingly expressed his gratitude, and told how his vacation and trip were enjoyed.

THE BACON BUSINESS.

One of the championship pair of dressed hogs was presented before a large audience, who took seats to listen to a lecture on swine carcasses. The specimen, owned by Rettie Bros., Norwich, Ont., was from a Tamworth boar and a three-quarter-bred Yorkshire sow. Mr. J. W. Flavelle, Toronto, said that Canada is producing the Wiltshire side, while Americans are supplying Cumberlands. It was explained that the Wiltshire includes the shoulder, side and ham of the hog. It is never carried or held after it is once ready for market, so that hogs for Wiltshire sides must be bought to be sold as bacon six weeks hence. If held it becomes stale, and thus hurts the market and reacts on the trade. Farmers who hold their hog after they are ripe are guilty of the same sort of folly, because they injure their product by so doing. Mr. Flavelle said it is impossible to tell what the market will pay six months hence, and the only safe way was to furnish a steady stream of supplies for each month in the twelve. Men who do this will get a fair return for their efforts. A special effort should be made to keep up supplies in June and July, when there is frequently a shortage. The speaker assured his audience that there was no understanding amongst the various packing houses as to prices. A previous attempt at this sort of thing proved very unsatisfactory, and was abandoned permanently. It is Mr. Flavelle's opinion that the increased number of packing houses will do good all around. Competition helps to quicken those interested, and to keep them up to the mark. Mr. Flavelle was asked many important questions, which brought out much important information.

Mr. Wilson, of Ingersoll Packing Co., referred to the show as a great instructor and object lesson. When questioned about the grading of hogs, he said their buyers were paid salaries, and instructed to pay prices for hogs according to quality. Regarding the question of breeds, Mr. Wilson said packers did not consider the Duroc-Jersey, Chester White or Poland-China suitable hogs from a bacon standpoint. The Yorkshire sow and Tamworth boar produce the favored type.

Mr. Joseph Brethour assured the audience that even a correct form could be spoiled by improper feeding. Mr. Brethour weans his pigs at two

months old, then feeds barley meal and milk. The chop is soaked one meal ahead. After the age of four or five months, grain was given only twice a day, with vegetables or apples at noon.

Mr. Rettie's sweepstakes winners were fed in the early part of the finishing period on a mixture of corn and shorts in equal proportions, with whey added. For finishing, barley and wheat, half of each, were fed with whey.

Prof. Grisdale pointed out that corn was proved to have a tendency to produce soft pork, but this could be modified by the use of milk. Oats, peas or barley, or a mixture of the same, had given good meat every time.

BEEF UP FOR DISCUSSION.

Mr. Thos. Crawford, M. P. P., Toronto, had for a text the champion fat steer exhibited by James Leask, Greenbank. Mr. Crawford went on to show that it was very important for a farmer to be able to judge cattle. In-bred and in-fed quality are both essential. The champion steer is of Shorthorn stock. In form he is very close to perfection. He has good quarters, carried well down to the hock. He has a wide, well-filled loin, is close-ribbed and well rounded. His body is deep and near the ground. Such an animal cannot be gotten from Jersey, Ayrshire or Holstein stock, or even crosses from them.

The in-fed quality of this steer is shown in the even, well-laid-on flesh—fat and lean mixed. That can only be gotten by good feeding. Even with feeding, however, in-bred quality is necessary to start with. For best results in the finished animal, the calf flesh should never be lost. No amount of good feeding can make up for a stunted calfhood. Mr. Crawford deplored the fact that our beef cattle are deteriorating, chiefly on account of the development of the dairy industry and the use of immature bulls.

Mr. Robt. Miller, Stouffville, speaking from a breeder's standpoint, said he did not want an animal narrow at the tail. A beast should have a good breadth across the back in front of the hips and carry weight well down to the hocks. Flesh from these parts furnishes the valuable cuts. A small head and short neck are good features. No animal is good except it possesses plenty of heart room. While a good stomach is essential, excess here is to be avoided.

MUTTON FORM AND CARCASSES DISCUSSED.

With a leggy, inferior specimen of the Oxford breed and a well-formed Shropshire lamb as an object lesson, Mr. James Tolton and Prof. Grisdale addressed a large audience on mutton form. Mr. Tolton pointed out the good and bad points of either, showing the importance of the blocky form, which gives the largest amount of cuts that sell for the highest price. This requires a good development across the hips, well down the quarters. A deeply-fleshed loin is very important. A good mutton sheep is well ribbed up and plump just behind the fore legs. This indicates constitution, which is all-important. His neck should be no longer than will allow him to graze comfortably. The front legs should be well apart, and the underline should be well down, straight and parallel with the back.

Prof. Grisdale emphasized the point that while fancy or breed points are necessary in developing a breed of sheep, the end of all is the block, and therefore the judging at a fat-stock show should be done from the consumer's standpoint. The sheep that is too fat to sell well dressed should not win in the live classes. Hon. Mr. Dryden referred to this matter, and pointed out that the purpose of this show is to teach breeders what the market needs, and, therefore, what to produce.

Mr. Foulds, a Brantford butcher, and Mr. Tyson, a Guelph butcher, spoke from a butcher's standpoint, with dressed carcasses hung up before the audience. These men, who know from experience, contended that the too-fat sheep cannot be sold. The best selling carcass is a well-developed, thick lamb, not overly fattened. The two carcasses displayed were those of the first and second prize yearling Shropshires. The winner dressed some fifteen pounds less than the other, largely because it was less fat. The third-prize sheep was overdone, and therefore less desirable to the consumer. Frequently a butcher has to trim off a third of the fat from the best cuts and throw it aside for suet before he can supply what consumers want. An over-fed animal is therefore unprofitable to the butcher. A fairly-fattened animal, having lean and fat well distributed, gives a first-rate quality of meat and little waste.

A Fat Stock Show Conundrum.

A writer in an English exchange propounds the following conundrum: "If the Hereford steer, Lord Roberts, beats the Queen's Shorthorn heifer, Cicely, and Cicely beats the cross-bred heifer, Ladysmith, and Ladysmith beats Lord Roberts, how much is Lord Roberts better than himself? Or, if Lord Roberts is second to Ladysmith (as at Norwich) and Ladysmith is nowhere to Cicely (as at Birmingham), and Cicely cannot even reach the reserve place (as at Smithfield), how far down the list ought Lord Roberts to be. This is a first-class Christmas conundrum—one of the best for some years, and is only equalled in mysteriousness by the record at the late show at Guelph, where the class sweepstakes was given to a second-prize sheep in the same class by consent of the judges responsible for the first ruling.

The Late John I. Hobson.

BY C. C. JAMES.

Will you allow me to make a few references to the late John I. Hobson, whose death came as a sudden shock to so many of his old friends. It was fourteen years ago that I first made his acquaintance. For three years in succession we were thrown together intimately in connection with Farmers' Institute work, and, from constant companionship during those days in travelling over all parts of Ontario, I think I got an acquaintance with the man that would not have been possible from simply meeting him in business transactions or in ordinary everyday association. We travelled together, put up together, roughed it together in such a variety of ways, that I believe I saw certain characteristics in him of which otherwise I would have been quite ignorant. His counsel and encouragement to me, a young man just gaining experience in Institute work, have always been appreciated, and ever since it has always been a real pleasure when his fine, well-developed form appeared in the doorway of my office. I was always sure of a half-hour's pleasant chat about agriculture, the country, and the men in whom he was so much interested. These talks were always elevating; he kept away from small talk and gossip; there was a healthfulness about his views and conversation that was always refreshing. At the same time, I always found him a man of great moderation and modesty. Some people I know would think he was or must be conceited, for he had made a success of his work, and he carried himself well. I always thought he did so not because he was conceited, but because he felt a pride in his calling, and carried himself as though he tried to live up to his standard of what the farmer should be. In all the fourteen years of my acquaintance with him I never heard him say an unnecessarily harsh word of any man, especially of one of his own calling. His presence at our Institute meetings was in itself a fine element. Then, he was not somber or morose; he thoroughly enjoyed humor and mirth of a commendable nature. He could have a good laugh at another without the too frequent accompaniment of malice and unnecessary wounding of feelings. He could tell a good joke on himself with keen enjoyment. Envy, I think, was not a part of his being. When out on Institute work, he appeared at his best when we were so fortunate as to be the guests at some rural home where neatness and comfort were noticeable, and the highest ornament of the home was a bright, well-mannered family thoroughly in sympathy with one another. Two places he has often recalled since: one was a neat, clean, plainly-furnished, but comfortable, home in an eastern county in the backwoods; the other was a Quaker home in the West, where peace and goodwill were visible everywhere, especially in the face of the venerable father and mother.

Mr. Hobson impressed himself upon my observation particularly in his very high appreciation of good speaking, high-class literary production, and fine scenery. One Sunday evening in St. Thomas we went to hear a preacher who has since passed away. It was truly an eloquent sermon, preached by a man of another denomination than his own. His memory of that magnificent sermon never failed. He went up and thanked the preacher at the close of the service, and since then I have heard him again and again refer to the pleasure that it gave him. He had read many substantial works of English history and literature, and many a time in a quiet country hotel, while waiting, he has revealed his love for the best in letters. As for his love of scenery, he never missed a fine view. Only a few days before his death he dropped in for a half-hour's chat, and the talk was almost entirely made up of an account of the pleasures of the trip taken summer before last with the Legislative party to the Rainy River District. He had travelled much, west to the Rockies and east across the Atlantic; but his enthusiastic description of that trip showed that his own country, his own Province, had a charm for him greatest of all. Wherever we went, he was interested in the early history of Ontario, and was always pleased to learn about the progress of our own people. Last of all, let me refer to his companionableness; he loved society of the best kind; he could talk, and he could listen. Among men of the right sort he opened up his true nature. His finest qualities were reserved for his own friends, and especially for his own family. It was in his own home that he was most beloved. His love for his own was very strong. When his only son died, a short time ago, I wrote him a letter of sympathy, and in reply I received a proof, if such were needed, that he was a man of the strongest family affection, one of those men whose feeling is not demonstrative, but so deep that others cannot fully appreciate. To those who knew Mr. Hobson intimately he revealed himself as a man of exceptionally fine qualities.

C. E. SIMPSON, Morpeth, Ont.:—I received the Bible, which I chose as my premium, in good condition, and I am well pleased with it.

All are delighted with the valuable premiums we are offering for procuring us new subscribers.

Clydesdales at the Chicago International Live Stock Show.

As the Clydesdale class is the one of most interest to our Canadian readers of those included in the above show, we confine our review briefly to that class, which was of a very high order of individual merit, and the animals shown in the pink of condition, without being overdone, the 1st prize in the 4-year-old stallion class going to imp. Laminated Steel 9190, sired by Cedric 929, out of Princess of Craichmore 3rd, and owned by Alex. Galbraith, Janesville, Wis., a magnificent horse, which was favorite with many for championship honors. Second place was given to imp. Benedict 9300, a son of Baron's Pride, the property of Brookside Farm Co., Fort Wayne, Ind.; and 3rd to Palmerstoil, shown by N. P. Clark, St. Cloud, Min., and sired by Royal Standard. In the 3-year-old class, 1st place was assigned to Prince Goodwin 8931, owned by McLay Bros., and sired by Handsome Prince 5581. This horse was considered by many good judges a strong claimant to the male championship of the class, which was given to the 1st-prize 2-year-old colt, imp. Earl of Bombie 9310, by Baron's Pride, shown by Clark, of St. Cloud. Both are grand specimens, as also is Laminated Steel, and these well represent the best of the breed. Second place in the 3-year-old class was given to Clark's Alpine 9233, by Mains of Aries; and 3rd to Galbraith's Lord Charming 7364. Second prize in the 2-year-old section went to Clark's Cardonald 9254, by Prince Patrick; and 3rd to Brookside Farm for Prince Lyndoch. The 1st prize of \$100 for the best four animals, the get of one sire, was awarded to N. P. Clark for the progeny of Baron's Pride. The female championship was won by McLay's 2-year-old filly, Handsome Darling; and the gold medal for best group of five pure-bred Clydesdales went to N. P. Clark's entry. Canada's contingent to the heavy horse classes was a collection of six splendid Clydes shown by George Moore, of Waterloo, which made a brilliant score in the prize list, winning every first prize in sight in the classes in which they were entered, including the \$100 prize for best pair weighing over 3,400 lbs., to wagon; 1st prize of \$100 for best three horses abreast; 1st prize of \$125 for best four-horse team, wheelers weighing 3,400 lbs.; 1st prize of \$150 for best six-horse team to wagon; gold medal, net value \$100, for best pair Clydesdales shown to wagon; gold medal, net value \$100, for best team of four Clydesdales; making a total of \$675, a remarkable record, and one of which the country as well as the owner may be justly proud. These six horses were sold at the close of the exhibition to Nelson Morris, Chicago, for \$3,000.

To Prevent Horses Cribbing.

To the Editor FARMER'S ADVOCATE:

In your issue of the 20th of November I see some suggestions re cribbing horses. May I give my experience? Horses that are much in the stables acquire the habit quickly, especially if predisposed to indigestion, and they soon follow suit if they see another horse do it. Musty or mouldy hay and grain will manufacture more cribbing horses than can be told of, if they are in the stable much. I had charge of a number of horses of a tram company. They were in the stable most of the day. We found that if the habit was once started, it was difficult to



stop it. The only humane method I found was a muzzle, made of 1-inch half-round iron, riveted on to the halter, and worn always in the stable. It is made in the flat, something like this: The ends are bent at right angles at A (see Fig. 3) and are riveted on to the cheek straps of halter: the round ends, B and C, are curved upwards in such a manner as to come over the nose and under the lower lip of horse, so preventing him from catching hold of anything with his teeth, at the same time allowing him to feed and breathe freely. The hay fed should be cut not less than 1 inch long. The width across the muzzle (Fig. 3) at x is 2 1/2 inches. I am not an artist, but the muzzle in use looks something like the sketches above (Figs. 1 and 2).
Selkirk, Man. SAMUEL F. ROBERTS.

Prof. Reynolds on the Block Tests.

To the Editor FARMER'S ADVOCATE:

SIR,—With regard to the effect of the block test on the breeds of swine, there is on the whole considerable improvement, more especially in those breeds that are capable of improvement along the bacon type. The Yorkshire, for a large class, was exceptionally good—much improved over last year. Of the 12 Yorkshire carcasses shown, 10 have been

graded No. 1 by the Davies Co., of Toronto; 1 No. 2, and 1 unfinished.

The largest class, the Tamworths, have not equally improved. Of the 20 shown, 10 were graded No. 1, 4 medium, 3 No. 2, and 3 unfinished. They appeared to have been less carefully fed.

The grades are pushing themselves rapidly to the fore, both in numbers and quality. Last year 4 grades were shown, and 2 of these were 20 and 40 pounds, respectively, over weight. This year 8 were shown, of which 6 graded No. 1, 1 medium, and 1 No. 2. A pair of grade carcasses also won sweepstakes. Of the smaller classes, the Berkshire and Essex are rapidly conforming to the required type. Two of the E-sex carcasses, in particular, presented every appearance of the Tamworth. There were 4 in each of these classes, and all graded No. 1.

The American classes—the Poland-Chinas, Duroc-Jerseys, and Chester Whites—are diminishing in numbers at the test and not improving in quality. The judges awarded no prizes to any of these classes, on the ground of unsuitability. Their decision was pretty well borne out at the packing house. Of the 6 Chester Whites, 4 graded No. 1; of 4 Poland-Chinas, 1 went No. 1; of 4 Duroc-Jerseys, 1 went medium and 3 No. 2. It must be borne in mind that the grading at the packing house was based upon the commercial standard, which is necessarily less strict than that of the showing.

There is greater improvement in the quality of mutton shown. Last year, the general complaint of the judges was that the mutton was too fat. While there is a much larger exhibit this year, only 2 mutton carcasses were decidedly fat. Any errors, however, are still on the same side as last year—a tendency to make yearlings too fat and to leave lambs too thin. This tendency was quite evident in looking at the carcasses, and is plainly brought out by the judges' awards. In nearly every case, the prizes went to the lightest carcasses in the yearling classes, and to the heaviest in the lambs. As in the swine classes, the 1st sweepstakes went to a grade.

The block test is undoubtedly a potent factor in harmonizing the judgments on classes before and after slaughter. There is this year less discrepancy in this respect than last year. The appointment of the same judges for live and dressed classes, and requiring these judges to justify their decisions before the public in the lecture-room, will certainly



THE LATE E. J. LAWRENCE.

lead to a more careful and discriminating study of those indications in the live animal that point to the most desirable quality of meat in the carcass. There is a decided demand for this "harmony of judgment," and at the meetings held last week scant consideration was given to "breeders ideals" that interfered with the demands of the consumer. Ontario Agricultural College. J. B. REYNOLDS.

[EDITOR'S NOTE.—Prof. J. B. Reynolds, of the O. A. C. staff, who writes the foregoing letter, has had the general supervision of the block tests at the Ontario Provincial Winter Show since their inception.]

The Late E. J. Lawrence, Pioneer of the Peace River District.

To the Editor FARMER'S ADVOCATE:

Many of your readers will, no doubt, learn with regret of the sudden death, on November 8th, of Mr. E. J. Lawrence, pioneer of the Peace River country and for a number of years a contributor to the FARMER'S ADVOCATE. Born in South Stukley, Shefford, Province of Quebec, in 1849, being the youngest of a family of six, he was but two weeks old when his father died, leaving six small children to the care of his wife: the oldest was but six years of age. At the age of 21, Mr. E. J. Lawrence married Lydia M. Kneeland, and for several years taught school in the Province of Quebec. In 1879, while studying for high-school diploma at McGill College, Montreal, he heard the call of Bishop Bompas, of McKenzie River District, for a practical teacher and farmer for Vermilion Post on the Peace River. He immediately responded, leaving Montreal in May, going by Chicago and Winnipeg and thence by way of Old Ft. Carlton, Prince Albert and

Green Lake by cart, and by water to Lake Athabasca, and up the Great Unjaga, or Peace River, in Hudson's Bay Company's longboats to his destination, where he arrived with his family on the 10th of September, after suffering hardships only known to the old-timer.

The first winter was passed in a house, so cold that water in a bucket would freeze on one side while it scorched before the chimney fireplace on the other. The food supply was scanty, and they were frequently in danger of starvation.

During the winter lumber was got out on the island half a mile away and hauled to the site chosen for the training school, with one small cayuse, and the following summer—besides breaking eight acres of land with two little horses—the Irene School was built and moved into the following November. In 1882 the school farm produced 240 bushels of barley and 1,500 bushels of vegetables. In 1885, not satisfied with purchasing the necessary flour at \$25.00 per sack—only \$50.00 per head was allowed for the support of the scholars—he undertook to bring in a small portable grist and saw mill with a 12-h. p. Waterous engine, which was an enormous undertaking in those days, having to be drawn across the prairie from Calgary to Athabasca Landing, thence by boat to Lesser Slave Lake and then again overland to the Peace River Crossing, whence it was taken on large rafts down the Peace to Vermilion, 375 miles. Having been transported 900 miles from the railroad without a single mishap, it was landed at its destination, tooting its own welcome, the pioneer engine of Athabasca. In 1891 he left the school and went farming, ranching and milling on his own account, and soon worked up quite a trade in lumber and shingles, oxen for the northern transports, butter which was sent within the arctic circle, as well as cheese which was far noted for its fine quality. Needless to say, he did not ship grain, but he did ship flour through the traders to the far north, and Vermilion was noted as the place where they had flour to eat the year 'round.

Nor was the education of his family neglected. His oldest daughter was sent to the Northwestern University of Evanston, one of Chicago's suburbs, from whence she graduated in two years, having taken the three-years course and graduated with honors in two. She then went to the Women's Medical College of Chicago, and took the four-years course in three, graduating at the head of all the medical students of the State of Illinois for that year, and was appointed resident physician of the Chicago Eye and Ear Hospital for the ensuing year. She has since been in charge, with her husband, of the Wiley Memorial Hospital, Kuchien, South China. Fred, the second child, visited the fair at Chicago in '93, being the only representative of the District of Athabasca. He has since attended college in Indiana, but on account of his health returned in the fall of '98 to the Peace River.

On the death of his wife, which occurred in March, '98, Mr. Lawrence made over his business to his two sons, Fred and Fenwick, and went to Edmonton, returning in the spring of '99 with a thoroughbred stallion for his sons' ranch, and stayed during the summer, leaving again in September, with his youngest daughter—who was the first white child born on the Peace River—for Edmonton, where he could obtain better educational privileges for her.

Mr. Lawrence was given charge of a steam threshing outfit, and it was in the discharge of his duties that he got hurt. He tried to save the life of one of his hands, and succeeded in doing so, only to lose his own. Truly, bravely he lived, and his last act was a noble one.

Peace River. FENWICK N. LAWRENCE.

Tightening Wires on a Fence.

To the Editor FARMER'S ADVOCATE:

I do not know whether this method of stretching wire on fences has ever been described in your paper or not. It is new in this part of the country, but is coming into general acceptance because of its superiority over old methods. The usual way to stretch wire is to put a stretcher on the wire, then to put a stout stick in the ring of the stretcher, brace the stick against a post, and thus tighten the wire by pressing against the stick. This had to be done every seven or eight rods, and unless the post was very firmly planted in the ground it was sure to be moved several inches out of position. The new method is as follows: At one end of the fence place a common farm wagon; by placing a chain through the end of the tongue, anchor it firmly to a stake driven firmly in the ground; jack up one of the hind wheels so that it is clear of the ground, first seeing that it is on a line with the side of the fence where the wire is to be attached; then staple on the wire at the desired position on the extreme post of the fence, place the other end around a spoke of the wheel close up to the hub, then turn the wheel around until you have the desired tightness. The best way to turn the wheel after the strain of the wire comes on it is to get on the spokes with your feet near the outside, and keep treading up as the wheel goes round. By this method fifty or sixty rods of wire can be tightened at once, and in the most satisfactory manner.
M. SWART.

Middlesex Co., Ont.

Annual Meeting of the Association of Agricultural Chemists.

HELD IN WASHINGTON, D. C., ON FRIDAY AND SATURDAY, NOV. 16TH AND 17TH.
(SPECIAL CORRESPONDENCE)

At the annual meeting of the American Official Agricultural Chemists, held last year in San Francisco, California, it was decided by the Association to divide the work of soil and plant ash analyses, placing each under a separate referee. Heretofore the two subjects have been under one referee. In recognition of the investigation work of Dr. A. E.

composition of plants, errors are likely to result through volatilization and through fusion.

Dr. Shuttleworth claims that he has worked out a method through which absolutely accurate determinations of plant ash can be made, avoiding in its preparation both volatilization of the constituents and fusion of the ash. His report brought out these two points most clearly; and the Association, after the submission of his report, authorized the referee on ash analysis for the coming year to adopt his method in next year's investigation work.

There were present at the above Association some 97 agricultural chemists. During the evening of the first day's meeting, Dr. Wiley, Chief Chemist

of the Department of Agriculture (Division of Chemistry), Washington, D. C., gave a lecture in the chemical laboratory of the Columbian University, on The Sugar Beet and the Manufacture of Sugar. The lecturer described fully the exact form of the sugar beet, position it should have in the ground, causes of deterioration and of improvement in sugar contained, and gave limelight views of every operation through which the sugar beet passes in the factory, to the separation from it of the refined sugar. During Dr. Wiley's lecture, he discussed the consumption and production of sugar in the different countries of the world, gave figures showing the total production of sugar out of the sugar cane and the sugar beet, and dwelt upon the causes which have resulted in a steady increase annually in the amount of sugar manufactured out of the sugar beet. He attributed this increase to the application of a knowledge of agricultural chemistry to the cultivation of the sugar beet. His lecture, which was highly appreciated by the agricultural chemists present,

concluded by reference to the proportional increase in population and sugar consumption.

It is not too much to say that this Association of agricultural chemists is doing a great work, and that the chemists of European countries have, during the last few years, recognized its efforts as a most valuable aid in the development of agricultural science.

Storing Ice for Dairy Purposes.

To the Editor FARMER'S ADVOCATE:

As now seems an opportune time, I wish to offer a few suggestions on the storing of ice for use on our dairy farms. But allow me, first, to point to the great necessity that there is, under our creamery system, for so doing.

In the majority of the creameries in Ontario, and many States of the Union, the creaming of the milk is done at the creameries by means of power separators, with the result that the patrons have the care of one-half the milk for twelve to fourteen hours at most, and of the other half only during the time of milking and delivering the milk. When we consider this, along with the additional fact that each patron's milk is delivered in a separate can, we readily see that the buttermaker has things largely under his control, as, besides having to do with the care and ripening of the cream, he has the privilege of examining each patron's milk and advising with him, and of rejecting all milk of inferior quality.

Under our cream-gathering system, however, the patron becomes a much more important factor, and his responsibility is correspondingly increased, as he has not only the care of the milk, but also the creaming of it and the care of the cream for a considerable time afterwards. In short, the quality of the butter depends fully as much or more upon him than upon the buttermaker, for flavor in butter is the first and greatest consideration, and the flavor of the cream determines the flavor of the butter. One patron who is either careless or lacks proper facilities for keeping his cream undoes the good work of a dozen others, since a small amount of poor cream mixed with a large quantity of good leavens the whole lump, and soon all becomes bad.

Many patrons wash and keep their dairy utensils scrupulously clean, practice cleanliness in milking, and keep their milk and cream in a place where the surroundings are clean and the atmosphere pure, and yet their cream arrives at the creamery in a condition unfit for making good butter. Why? Because through lack of facilities for cooling and keeping it sweet, it becomes too sour or overripe. I wish to say, and to say with emphasis, that our cream-gathering system, under which the cream is gathered only twice or, at most, three times a week during summer weather, from its very nature demands of every creamery patron that he provide means for cooling his cream and keeping it sweet until collected. Many of our patrons have done, and are doing, much to improve the quality of their cream, while some have yet to begin.

With ice obtainable in abundance, merely for the putting of it up, and with favorable climatic conditions during the summer, I know of no part of the world in which the natural conditions are more favorable for conducting creameries on the cream-gathering plan, where the country is sparsely populated and the cream cannot be collected daily, than is our Northwest country.

ICE HOUSE OR ROOM.

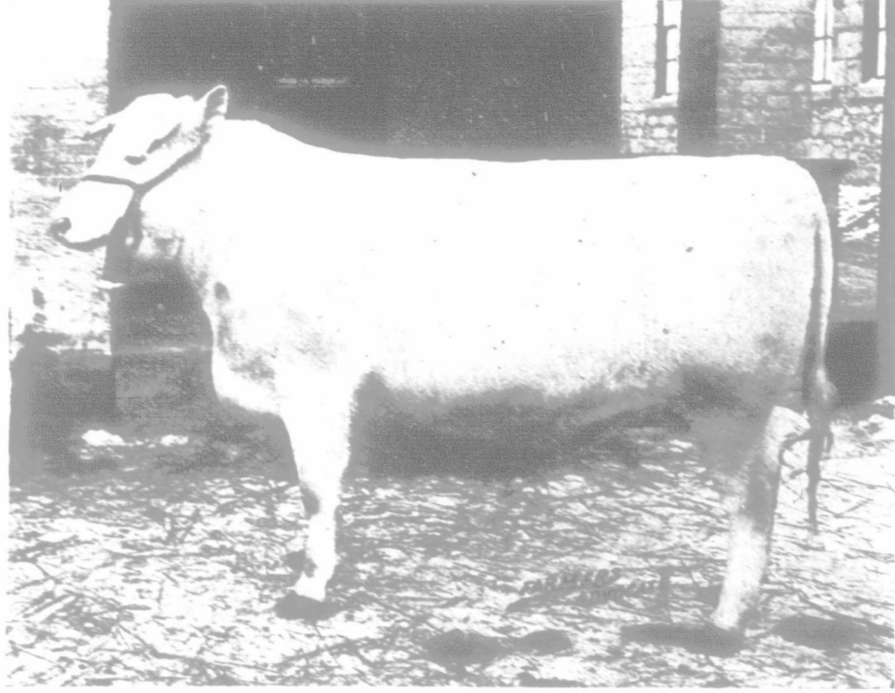
One way of storing ice for summer use is to make a room in the corner of a barn or stable for storing the ice, or, better still, to erect a small building for the purpose. We would not advise storing too small a quantity of ice, not less than eight to ten tons, as a little of it—and a greater proportion of a smaller than of a larger quantity—is sure to melt.

As there is about forty cubic feet of packed ice to the ton, the ice would need to be about eight feet square and six feet high to contain ten tons. This means that the ice-room should be about eleven feet square, inside, and say eight feet high, to allow for space at the sides for straw or other packing material. It is not necessary to build anything elaborate—just one ply of lumber on the outside of building will do nicely, although it is an improvement to sheet it up on the inside with rough lumber. Bank the ice-house all round to prevent air from getting in at the bottom. To make a bed for the ice, one very simple method is to lay small poles on the ground, and over these eight to ten inches of straw. Of course, sawdust is fully better than straw, if you have it.

It is best to begin putting up ice when it is sixteen to eighteen inches thick, cutting the blocks fifteen to sixteen inches wide and thirty to thirty-two inches long, taking care to have the corners as square as possible so that the blocks will pack closely. When packing the ice, place the blocks as close together as possible, and fill all crevices with finely-broken ice and snow. If fine straw and chaff be used as packing material, leave a space for it, between the ice and the wall, of not less than fifteen inches.

Use as dry straw or chaff as you can obtain, and pack it firmly. If sawdust be used, a foot of space between the ice and the wall is quite sufficient. Where sawdust is used it is better to sheet up inside the studding, as the sawdust swells and exerts quite a strain. Put about the same thickness of packing material on the top of the ice as at the sides.

Watch your ice during the summer, and should it begin to melt, tramp the straw down at the sides



CRIMSON ROBE.

Sweepstakes Shorthorn steer, Provincial Winter Fair, Guelph, 1900.

BRED AND OWNED BY ISRAEL GROFF, ALMA, ONT.

Shuttleworth on plant ash analysis, the American Association appointed him referee on ash analysis.

No subject in agricultural chemistry is of greater importance than that of the composition of agricultural products. Without an exact knowledge of the composition of our crops, it cannot be definitely answered as to what constituents the crops remove from the soil; and further, the exact influence of different soil treatment and manures upon the composition of the crop cannot be definitely determined. Our soils, which have been under cultivation for a number of years, do not produce the yield and quality of wheat and certain other crops that they have formerly done. To what extent this tendency to depreciation in quantity and quality of crop is due to climate or to variations in the soil's fertility or condition is a matter worthy of careful study, because, through such information, it may be possible to so modify our soil's fertility that we shall produce crops of increased yield and improved quality. At the very basis of this important study lies the composition of our crops. It is therefore of the highest importance that the determination of the composition of our plants be exact, for without an exact method for the determination of the composition of our crops, we are not in the best position to study variations in composition resulting from differences in conditions of manuring, of soil, of climate, etc.

The annual meeting of the above Association was held this year in Washington, D. C., upon the 16th and 17th of November. There was present at that meeting an eminent agricultural chemist, Dr. Bernard Dyer, of London, England, representing the Rothamsted Experiment Station at this year's meeting of the Association of Agricultural Colleges and Experiment Stations. His remarks upon the importance of sampling soils for chemical analysis, and upon the method now adopted for sampling soils at Rothamsted Experiment Station, were listened to with very great interest and profit by the agricultural chemists in attendance. There were also present several Canadian agricultural chemists: Prof. Shutt and Dr. Macfarlane, of Ottawa, and Dr. Shuttleworth, of the Ontario Agricultural College, Guelph. Two subjects of considerable interest to the Canadian, as well as to the American chemists, that came before the notice of the meeting were: First, methods for the analysis of Thomas-Phosphate Meal, and Plant Ash Analysis.

As referee on plant ash analysis, Dr. Shuttleworth presented his report of the year's work, which investigated conditions under which the volatilization of certain important constituents of the ash of plants in its preparation occurs, and the chemical combination of the silica and the ash with certain of the bases through fusion. This report, which is the combined results of work conducted in the chemical laboratory at the O. A. C., the chemical laboratory of the Department of Agriculture (Division of Chemistry), Washington, D. C., and that of the Agricultural College of Raleigh, N. C., upon the above two points, showed clearly that in ash preparation for the purpose of determining the



ROYAL VICTOR 34681.

Yearling Shorthorn bull. (See Gossip, page 26.)

BRED AND OWNED BY J. & W. B. WATT, SALM, ONT.

and any spaces that may form between the blocks. We have often saved ice in this way. Where sawdust is used little trouble is experienced. It is wise to have a circulation of air through the top of the building to carry off the heated air inside, caused by the sun striking on the roof.

When constructing an ice house or room, it is

REPEATED

important that it be located as convenient as possible to where the ice is to be used. If erecting a separate building for the purpose, it would be wise to build it large enough to allow of having a small room in the end, in which to place the separator, if one be used, and also the tank for holding ice and water for cooling the milk and cream. In fact, this little room might constitute the dairy, in which churning and other work could be done. A building eleven to twelve feet wide and fifteen to sixteen feet long would be quite large enough for both an ice-house and a milk-room or dairy for the average farmer. Those who feel unable to erect a frame building, might find it convenient to build a log one. Consider your conditions, and make an honest effort to do the best you can. "Where there is a will there is a way." If you can't store eight to ten tons of ice this winter, store four or five tons for a trial.

If you use a separator, and have only the cream to cool, and have a good well or spring of cold water, you may be able to get along without storing ice. You know how your cream has kept heretofore. Were you able to keep it perfectly sweet until collected? If not, you should store ice. Don't try to keep your cream merely by setting it in a tank or barrel and changing the water around it occasionally. It entails much work and is a failure every time. If you cream your milk by means of deep-setting cans, you can't afford to do it without ice. Your losses will be heavy. If sending cream to a creamery, don't adopt the shallow-pan system, as the cream ripens considerably in the pans, and even though subsequently cooled, is almost certain to arrive at the creamery in an overripe condition. Under our creamery system, the common practice is to establish cream routes and collect the cream in loads, from twice to three times per week. As a considerable portion of the cream is on the road a good part of the day, it is subjected, in summer, to a more or less severe test. But if perfectly sweet and clean-flavored when collected, it passes through this little ordeal without any very perceptible injury, and arrives at the creamery fit for making a high-class butter.

The kernel of the whole matter, then, is that our creamery system demands that each patron provide means for keeping his cream sweet and clean-flavored until it is collected, and with many this means that they must needs store ice for summer use.

J. W. MITCHELL.

Dairy Superintendent, Assa.

Farmers, Wake Up!

To the Editor FARMER'S ADVOCATE:

I noticed in one of the Ottawa papers the professions of the different members of the new Dominion Parliament, and I notice that the farmers of this great producing country have only twenty-nine representatives who thoroughly understand their wants, but we will have sixty lawyers in the House to frame and make more complicated laws. I admire the manly stand taken by Colonel Dennison, the Chief Magistrate of Toronto, who sees the law in all its forms dealt out to rich and poor. When he said the law of this country wants to be simplified, and that when the lawyers are through with a suit they have all the money that is in it, he only spoke the truth and voiced the sentiment of the great majority of the people of this country. For example, trouble arises between two parties, a suit is entered, a lawyer on each side engaged, and if the suit is a large one they secure two more lawyers, perhaps in Toronto or elsewhere, and in this way line up to argue the case, quite friendly with one another, while their clients are supplying the hard cash. In this way they lead their clients around the curves of the law, from court to court, until one or both clients and their families are ruined.

I also notice there are eighteen doctors elected. What do those men do in Parliament? Make long speeches and get good positions for their sons and daughters, sons-in-law and friends. Yes, and the doctors do more than that: they prescribe in the mornings for the members that have swelled heads, the atmosphere of the bar-room being too much for them; and often take a dose themselves to straighten themselves up; and for the above treatment, and I am sure for nothing more, when defeated at the polls they have the cheek to ask for a senatorship. Why should the farmers of this country fold their arms and allow such men as these to be appointed to the Senate and many other good Government positions? They were paid more than they were worth, as we never heard of any bill or good measure that any of them ever introduced, but we have heard of them getting positions for their families at good salaries, while the educated farmers' sons and daughters have to content themselves with teaching school at a salary from \$200 to \$300 per year. Farmers should bring this matter up in the Institutes, and see that their sons and daughters share in the good positions given at Ottawa, and which are secured by a much less brainy class of people. Remember this is a young and growing country, and now is the time to assert your rights.

Hoping you will give this letter a place in your journal, I remain,
Yours truly,
Ottawa, Dec. 25th, 1900. A FARMER'S SON.

The Anti-Tuberculin Test Meeting.

The most sensational event of the Provincial Winter Show week at Guelph, Ont., was the large and representative special meeting of the Dominion Cattle Breeders' Association, with Mr. Richard Gibson, president, in the chair. During its progress a resolution was unanimously adopted asking for a discontinuance of the tuberculin test in case of imported cattle. Dr. McEachran, the Dominion Live Stock Inspector, received a severe dressing down, and the Ontario Minister of Agriculture, Hon. John Dryden, and the Dominion Minister of Agriculture, Hon. Sydney Fisher, locked horns over the test, the former championing the cause of the breeders. Attention was called to the fact that progressive and intelligent breeders go to the Old Country and at large expense make purchases of the best breeding animals to be found. Though to all appearances in the pink of health and condition, they are subjected to an injection of tuberculin before leaving Britain and then get another dose at the Canadian quarantine station if they do not look right or the British test chart is not satisfactory to the veterinary official. If the animal shows a rise in temperature—which is not to be wondered at—it is condemned, while at the same time a breeding or a dairy animal on a Canadian farm may react under the test, but yet the law does not require its slaughter; nor is it considered necessary to put any restraint upon the trade in breeding cattle within the country. Men naturally ask, why this exasperating anomaly? Then, when cattle are sold to go to the U.S. they get another dose. The chairman called attention to the fact that the leading live-stock associations of the States had passed resolutions at Chicago asking the government there to abolish the test, as reported in the last issue of the FARMER'S ADVOCATE.

Mr. Arthur Johnston, of Greenwood, Ont., then moved, seconded by Mr. Alex. Smith, of Maple Lodge:

"That, in the opinion of the cattle breeders of Canada here assembled, the present regulations relating to the importation of pure-bred animals, which require the injection of tuberculin as a sure indication of the presence of tuberculosis, are unsatisfactory and likely to bring serious injury to the cattle-breeding industry of Canada.

"That, while the test may be used as an aid in the detection of the disease, it is not sufficiently exact to be relied upon.

"That the disease may exist in such parts of the animals which makes it impossible to be transmitted by contagion or otherwise, and that no real service to the country is being rendered by its use in that connection.

"Therefore, we earnestly request the Honorable the Minister of Agriculture to take such steps as may seem desirable in order to discontinue its use in that connection."

Mr. Robt. Miller, of Stouffville, Ont., a heavy sufferer by reason of the test, charged Dr. McEachran, the Chief Live Stock Inspector, with incompetence and vindictive treatment towards himself, and with being a foe of the breeding interests. He appealed to the Dominion Minister of Agriculture for a searching enquiry, and charged one Moore, Dr. McEachran's assistant, with injecting double doses of tuberculin into some of his cattle.

Mr. Arthur Johnston, though not a coward, confessed himself in absolute terror of Dr. McEachran and his assistants, and said in a few years breeders would look back amazed that they had so long patiently endured the treatment to which these officials had subjected them. He had had cattle tested by official experts in Scotland and declared free from disease, but in the Canadian quarantine they were pronounced tubercular!

Hon. John Dryden declared indignantly that the breeders were the victims of a fraud and a humbug, and they had reached a pass where the present tuberculin test regulation must be changed or they would have to quit the business of live-stock improvement. For one, he declined to have his business run by a veterinary with a few hundred dollars' worth of drugs and a squirt gun, destroying more in a few months than all the breeders of the country could build up in ten years. An animal in an advanced stage of the disease would not react, while another containing a germ where it would not be dangerous would. He had known an animal react up to 5 or 6 degrees, but when killed absolutely no trace of the disease could be found by an ordinary microscope. The test as now used should be abolished, and a policy of education in dealing with the disease inaugurated.

Mr. Wilson, of Glengarry (dairyman), reported that a Montreal veterinary had ordered six of his herd killed, but would not let them be buried, so they were left bleaching in the bush.

A voice—"That's not the law; the man must have been a fool."

Mr. Wilson—"There are a good many fools like him and they should be fired. A neighbor had a heifer pronounced sound, but when butchered, three months after, was found full of the disease."

Mr. W. E. H. Massey reported a similar case, and quoted a Boston expert physician, who told him that "it had yet to be proved where one case of human tuberculosis had arisen from bovine tuberculosis." The test system was not the proper one to stamp out the disease in cattle.

Prof. Harrison described the system in vogue in Denmark of dealing with tuberculous animals.

Hon. Thos. Greenway, of Manitoba, said his experience was that the test was not reliable, and

he favored a campaign of education. The late appointment of one officer at Buffalo to test all breeding cattle going out of Canada would simply kill the Northwest business.

Hon. Sydney Fisher said the only compulsory testing was in case of imported cattle. All other testing was done at the written request of owners of herds, and there was no law requiring slaughter in such cases. He denied that his officers had issued such orders. The test for imported cattle was in accordance with the advantageous arrangement entered into with the United States Government for the abolition of the old 90-day quarantine, and the new U. S. order was a direct contravention of that agreement. He argued that public and municipal opinion, demanding protection from diseased meat and milk, was the groundwork on which the imposition of the test rested. He desired to consider the interests both of the public and the breeders. The public would not sustain a government admitting diseased cattle. The results of experiments at Ottawa with calves and guinea pigs, in regard to the possibility of contagion, were thus far so complicated that no definite conclusions could be drawn.

Hon. Mr. Dryden took up the gauntlet, regretting the intimation that the law was there and could not be changed. He said it must be altered if it had to resolve itself into a fight. Breeders were being tyrannized over, and disease could never be corrected by an inaccurate test.

The resolution was then carried, without a dissenting voice, as was also another one by Mr. D. McCrae, seconded by Mr. Tolton, that the Association appoint a delegation to ask the Government to take steps to secure the free entry of Canadian cattle into England, just as Irish cattle are admitted.

One Cow.

Mr. William Taylor, Strathroy P. O., owns a common sort of a cow that annually makes an uncommon sort of a record as a profitable milk-producer. We append a few generalities and a brief statement of her year's work. As to breeding, she is of mixed extraction, Ayrshire, Jersey and Shorthorn entering into her make-up. As far as her rearing is concerned, she has been reared much as the average cow—on usual diet, without special attention. She "came in" March 21, 1900, and is now (November 30) just dry. Before coming in, she was dry about six weeks, milking from January 1 to early in February. She is in calf, and due about February 1, 1901. Her food cost for the twelve months, commencing January 1, 1900, is as follows:

Winter Period—January 1 to May 15, and November 25 to December 31.	
Marsh hay, straw, cornstalks, 15 lbs. daily: whole period, 11 tons, at \$2.50 per ton	\$ 3 12
Roots (when milking), 50 bushels, at 5 cents per bushel	2 50
Grain (oats), January, February, March, 1 lb. daily: 90 lbs., at 25 cents per bushel	67
Grain (oats), April 1 to May 15, 2 lbs. daily: 90 lbs., at 25 cents per bushel	67
Summer Period—May 15 to November 25.	
Pasture	9 00
Extra food on pasture, chiefly oats and green corn	2 00
Total food cost for the year	\$17 96

No house slops, peelings, etc., were given, this being fed to the poultry. Her gross revenue stands as follows:

Milk—January 1 to 31	\$ 3 00
April 1 to November 10	37 25
	\$40 25
This milk was delivered to the Strathroy Creamery, and totalled a little more than 6,000 pounds for the season.	
Milk used in the house (265 pints)	\$ 6 55
Milk sold privately	3 00
	\$ 9 55
	40 25
Total	\$49 80

Her calf was sold at six months of age for \$12. Both cow and calf were exhibited at the West Middlesex Agricultural Society's show in Strathroy, the cow taking second prize in her class and the calf first, the total money value being \$3.50. The total gross revenue from all sources now stands at \$65.30. Total food cost \$17.96.

Net returns for the year 1900, \$47.34. This cow, for the year 1900, gave a net return of \$50.

ADDENDA.

"Betty" is six years of age, dehorned, compactly built, an easy feeder, and weighs to-day 1,650 pounds. She is always in good condition. She experiences nothing but kind usage, and is milked with strict regularity. In conformation, a head short, with large nostrils and a full, kindly eye, a neck thick and somewhat short (a direct contradiction to that looked for in a profitable dairy animal), deep through the heart, good-sized barrel, ribs flat, wide and wide apart, loin long and wide on top, and thighs thin, with room enough for the udder. These can all be taken in at a glance. Her udder, however, is worthy of note. It hangs in full, loose folds from a well-developed escutcheon, shows no surplus fat, is carried well forward, and has four fair-sized teats set in four corners. It is an udder calculated to hold milk. The milk veins are prominent and more than usually tortuous, and are lost in the body through goodly-sized orifices. It is noticeable that one of the two milk veins divides shortly after leaving the udder, continues in two prominent

sections, and enters the body through two separate orifices.

The record of this cow shows nothing wonderful, as she gave in all only about 6,800 pounds of milk in twelve months, and this milk never tested more than 3.5 per cent. fat, and as low as 3.0. This milk represented about 270 pounds of butter. And yet this is an unusual record when compared with the majority, seeing that it shows at least twice the milk and butter production, and more than twice the net profit of the average cow; and the great majority of our cows are average, or less. The secret of success lies first in the man and secondly in the cow. Without skilled management, good cows rapidly deteriorate; without good cows, good management is worse than wasted. F. J. S.
Middlesex Co., Ont.

How to Improve the Keeping Quality of Butter.

BY C. MARKER, DAIRY SUPT., CALGARY, ALTA.

The keeping quality of butter is a relative term. No butter, however well made and cared for, will keep for an indefinite period. There is a gradual deterioration of quality going on in proportion as the conditions under which it is kept be favorable or otherwise.

In ordinary creamery practice, the conditions chiefly affecting the keeping quality of butter are: *Firstly*, its quality as to flavor, texture, and composition. The ideal type of a good keeping quality of butter should have a pure, clean flavor, a clear, transparent texture, a uniform color, containing about 13 or 14 per cent. of moisture. *Secondly*, the keeping quality of butter will depend on the temperature and condition of the storage room in which it is to be held until shipped to the consumer. The temperature should be low, as near freezing point as possible, and the atmosphere should be dry and pure.

Taking for granted, then, that the quality of the butter is the first and most important consideration, it will be clear to all that the buttermaker should be a judge of the butter, cream or milk which he has to handle in his daily work; in fact, I shall go a step further and say that the buttermaker who does not examine carefully the material which he is expected to manufacture into a first-class quality of butter does not know what he is doing. He does not know how his butter will turn out of cold storage at the end of a month, two months or more, as the case may be, no matter how good the cold-storage facilities be. A buttermaker's work should be, to him, a daily series of observations of the various conditions and their effects on his work; in short, observations of cause and effect. In that way only can he become a *scientific* worker. We should study not only our own work, but also that of others, through the medium of the agricultural press and publications, which are within easy reach of all students.

Our field of observation should extend beyond our own limited district or prejudice, when we can have the benefit of the experience of scientific workers in all lands, if we desire, through the medium which I have already mentioned.

Yes, the buttermaker should be a student, in the widest sense of the word: all the successful ones are. He has problems to deal with almost every day which can be solved only in the light of experience and research, armed with a full knowledge of his work, obtained by daily observations during the creamery season, and by attending a good dairy school. Here information of the most practical and direct nature can be had from the superintendent in charge and his staff of instructors. Augmenting these with the study of dairy literature, the buttermaker should, with the confidence and co-operation of his patrons, be able to overcome most difficulties and produce a quality of butter which will command a ready sale, at a good price, whether it be sold immediately or held in a good storage for some little time. I shall now endeavor to point out some of the characteristics peculiar to butter of an inferior keeping quality, as compared with those of a good keeper:

If we go into a warehouse and examine a number of packages of butter which have been stored there for some time, we shall find some packages which have kept well, and others which have not. The butter in the former, we find, perhaps, has a slightly "stored" flavor, yet it is sweet and pleasant to the palate. The texture is clear and firm, and we find on the back of the butter trier a few small drops of clear moisture, or brine. Bearing this in mind, examine the butter which has not kept well, though it may not be older than the first lot examined, and, in fact, it may have been made in the same creamery. On close examination of this, we find the flavor quite "off," perhaps *strong* and *cheesy*, and possibly the worst defect of all—BITTER and OILY. The texture is coarse; color "dull" and "thick," and the moisture as a rule "milky."

In a comparison such as this, the cold-storage facilities could not be the cause of this difference in the keeping quality of the two packages, so, in pursuing our investigation, we must trace it back to the creamery where the butter was made. The maker would be of the opinion that all his butter was made exactly alike, so far as such a thing be possible in a creamery, where there are so many varying conditions to deal with, and might not be able to account for such a vast difference in the character of the two lots.

In this connection, I might mention that some time ago I had occasion to examine a large lot of

butter which had been held in an ordinary warehouse, not a cold storage in any sense of the word, during a whole summer and the greater part of the following winter. I was asked to examine the lot and advise as to what could be done with it. A number of packages were picked out as being usable for cooking purposes, but some 75% of the whole lot was absolutely unfit for food. The two different lots of butter showed the characteristics already referred to. That portion which was declared useless was absolutely "dead." I find on my memorandum the following remarks on the butter which could be used for cooking purposes: Flavor "off," but not disagreeable. Butter must have been well made. Texture: solid, fine, clear grain and moisture, good workmanship. Color: clear, and to some extent transparent or sparkling. As to the "dead" portion, it had lost all the characteristics of butter as to flavor and texture. The color was dull and white.

In summarizing my remarks on the characteristics influencing the keeping qualities of butter, I would make the broad statement that BUTTER WHICH IS DULL OR OPAQUE IN COLOR, OF A SLIGHTLY BITTER FLAVOR AND COARSE TEXTURE, WILL NOT "KEEP," no matter how favorable the storage facilities may be, and on the other hand, that IN ORDER TO KEEP, BUTTER MUST BE PURE IN FLAVOR, OF A CLEAR, UNIFORM COLOR AND TEXTURE AND CLEAR MOISTURE.

We have found that there is a distinct difference in the keeping quality of butter, even though the conditions as to time and temperature of storage be identical in both cases. We have also failed to get any explanation from the buttermaker as to the source of the trouble, all the butter being made on the same principles and after the same method in the creamery; but we have noticed certain characteristics peculiar to the butter which was of an inferior quality, whatever others it may have as well, and may safely assume that if these characteristics are not wholly responsible for the trouble, they have at least a great deal to do with it.

The question of the keeping quality of butter has been discussed by buttermakers for years, but, so far as I know, no information of a scientific nature bearing directly on the point has been offered towards solving the problem until the celebrated scientist, Professor V. Storch, of Copenhagen, published the results of his investigations in connection with the "Continuous Butter Exhibitions" held in Copenhagen, under the auspices of the Danish Government. This is a work which has been carried on since 1880, and has done a great deal towards obtaining for Danish butter the position which it now holds on the British market, and is of a distinctly national character. From this work, extending over a number of years, a great mass of chemical, microscopical and bacteriological data have been accumulated as to the composition, physical properties and structure of various qualities of butter. Prof. Storch found in the course of his investigations that, while the chemical composition of "clear" and "thick" butters might be almost identical, there is a great difference in their structure when seen under a microscope. The thick or opaque appearance of butter is due to its serum, a very great number of minute drops of moisture, which is composed of water, albuminous matter, mill sugar, and ash. Samples taken of the best quality, or "clear," butter received at the Exhibition from time to time contained on the average about three and three-quarter millions of serum drops per cubic millimeter. A cubic millimeter is about the same size as the head of an ordinary small paper pin. The poorest samples, or "thick" butter, contained upwards of thirteen millions of drops in each cubic millimeter, or more than three times as many as the "clear" sample.

Bacteriological examinations, carried on at the same time, revealed the fact that this phenomena was associated with a large number of bacteria forms, which had developed bitter flavors in nearly every sample of "thick" butter examined.

Some of the conclusions which we can draw from the very extensive investigations reported upon by Prof. Storch are that the inferior keeping qualities of some butter may be attributed to certain forms of BITTER FERMENTATIONS IN THE CREAM. This is an abnormal condition of some milk or its products, and is due to several causes. The most important for our consideration are:

1st. Improper feeding of the milch cows. It is a well-known fact that excessive feeding of turnips, turnip leaves, and other strongly-flavored foods, will impart to milk a bitter taste, which clings tenaciously to the cream and butter made from it.

2nd. The period of lactation has a marked effect on the quality and flavor of milk. When the cows have been milking upwards of nine or twelve months, a bitter taste can generally be observed in the milk and its products.

3rd. The trouble may also be of bacterial origin, and becomes more prominent as the age of the milk increases. Under this head we may include lack of cleanliness as one of the causes.

Now then, considering the causes which I have mentioned in the light of our knowledge of conditions existing in Manitoba or the Northwest Territories, I do not think excessive feeding of turnips, or even an advanced period of lactation, can in any way be blamed for causing bitter fermentation of our milk or cream and an inferior quality of butter. Turnips are not grown to any great extent as yet, nor can it be said that the average milking period of our cows is very long. I doubt very much if it be more than six or seven months each year. We

shall then have to draw the inference that the bitter fermentation is due almost entirely to the handling, or the "mis"-handling, of the milk and cream from the time the milk is drawn until the butter is manufactured. We know for a fact the lack of cleanliness is to a great extent responsible for bitter flavors. A bitter flavor may also develop in cream which has been allowed to become too sour or, in other words, overripe, either before or after its arrival at the creamery.

The patrons furnishing milk or cream to the creamery are, or should be, as much concerned in effecting improvements in the average quality of our creamery butter as the buttermaker himself. This should be a work of co-operation. If they send their cream to the creamery in the right condition, the buttermaker should be able to manufacture from it a choice quality of butter, with the knowledge which he has of the various processes effecting his work, and in a properly constructed and equipped creamery.

It is not sufficient for them to know that he has these essential qualifications and facilities: their responsibilities do not end there. The success of our dairying industry depends largely upon the appreciation of *individual responsibility and co-operation* of all concerned. With it, the industry will stand; without it, failure is inevitable sooner or later.

I imagine I hear someone say: "We patrons went to considerable trouble and expense in building and equipping our creamery. We engaged a buttermaker with years of experience, who has attended a dairy school. We pay him a good salary for making our cream into butter. Besides, we have a board of directors, appointed to look after the business part of the work. What more could you ask us to do? Of course, if the buttermaker does not succeed in making a first-class quality of butter, which will bring the highest market price, we shall have to look elsewhere for one who can." I claim that the patrons' responsibility does not cease as long as the creamery runs. The principal duties of the buttermaker are perfectly clear to every one of his patrons, and their own duties should, in turn, be equally clear to them. It is their privilege to contribute towards the general good results of the common work by supplying their cream in good condition to the creamery, and by taking the buttermaker's advice in the matter of handling it, for he has made a special study of this subject. Their moral support is also highly appreciated by the maker when compelled to reject any cream which may not be suitable for making fine butter. This, I know, is a sore spot; but I think the maker should certainly have the support of the directors or those in authority. His responsibility should carry with it a certain amount of authority and right to discriminate. Thus backed up, he can do a great deal of wholesome educational work among the creamery patrons, to their mutual advantage.

To the buttermakers I would say: Endeavor to secure the confidence of your patrons by showing them that you are interested in your work and the success of their business. Show them your willingness to give them all the advice and assistance in your power, to that end. Let your watchword be, QUALITY, CO-OPERATION, and an INDIVIDUAL SENSE OF RESPONSIBILITY for the results of the work.

As to the work in the creamery, be on your guard against bad flavors, especially the "BITTER" fermentation, which is the cause of so much inferior butter and correspondingly inferior prices.

Condition in Testing Cows.

To the Editor FARMER'S ADVOCATE:

SIR,—I have read with interest your report, in Nov. 20th issue, of the milking trials of two great dairy cows in England, when the cow, Cherry, gave at first trial over 4 lbs. of butter in the day, and at the 2nd trial, 104 days after calving, although giving nearly the same amount of milk, she only made about half the amount of butter. You ask, how is this difference accounted for? The writer is of the opinion that during the first trial the cow was in good flesh and used that surplus fat in filling the pail with good rich milk, and at the second trial, 104 days after calving, she had long since reached her normal weight and had no surplus fat stored up in her body to draw from. Now, everyone who has had much experience testing cows for large milk and butter production has soon learned that one of the secrets of success is to have the cow in good condition, or, if you please, fat, at the time of test; very soon after calving is the proper time. If she is the right kind of a dairy cow she will, in some way we do not pretend to understand, use that extra flesh in putting fat into the milk; she will gradually reduce herself in weight, no matter how generous the feed, until she reaches her normal condition. Before she loses her surplus fat is the time for best results with test. The dairy cow is certainly a very mysterious creature. It is difficult to know why she will persist in varying the fat-content of her milk without any apparent cause whatever. The writer has in mind two heifers he was having officially tested for butter production for seven days. They were milked three times a day, same hour each day. Yet both of them gave, the entire week, about 2% less fat in the morning's milk than at noon or night. One would naturally expect them to give the richest milk in the morning, after a night of rest and quiet.

Southern Minnesota. W. J. YOUNG.

English Show-yard Results in 1900.

BY W. W. CHAPMAN.

For seven years past I have annually tabulated the results of the show-yard contests of the sheep section of the principal English shows, and its value as a means of reference is a great one, particularly when one requires to judge, not so much the present, but the past, history of the English flocks, for, after all, one of the most valuable and important facts for purchasers to ascertain is, what has this flock been doing in previous years? And for this reason, namely, that there happens in sheep-exhibiting, as in most other things, some phenomenal events, such as a young breeder, or, for the matter of that, an old one, being able, by the result of a judicious cross or perhaps a lucky fluke, to produce some extraordinary pen or pens of sheep, which may in some future time sweep the deck and clear all before them. In such cases as this, the value of past records becomes very great, for no one who is a careful breeder and selector would think of purchasing heavily from such a flock for stud purposes without careful enquiry. And why? Because the essential feature of all such animals is their power of prepotency and to impress their good qualities and merits upon their produce. These qualities only become assured after years and years of careful selection and breeding. Thence arises the peculiar value which those sheep have that are the produce of flocks which year after year have taken a prominent if not the leading place amongst those of their breed in the show-yard contests. Therefore, in order to give your readers the advantage of this information which I have at my command, I have to a certain extent incorporated the results of the previous six years with those of the present year, so far as they affect any present breeder whose name comes well to the fore in the present year's show record.

Leicesters.—Mr. G. Harrison, who takes precedence in the present year with 2 champion, 9 first, 6 second and 4 third prizes, at three shows, has occupied the same place during each of the years since 1894, including that year. Mr. J. E. Ward, second in this year's compilation, with 10 first and 4 second prizes to his record, was not included in that of 1894, 1895, 1896 and 1897, but came seventh in 1898 and fifth in 1899. He has considerably improved his position. Mr. J. J. Simpson comes next this year, with 3 firsts, 6 seconds, 4 thirds and a fourth prize, won at five shows. His position in previous years was: 1894, fourth; 1895, not in the compilation; 1896, seventh; 1897, third; 1898, third; and 1899, eighth. Mr. E. F. Jordan comes fourth this year, with 4 first, 4 second, 2 third and 1 fifth prizes to his record, won at two shows. In 1894 he was second in the compilation; in 1895, second; in 1896, second; in 1897, fourth; in 1898, second; and in 1899, third.

Cotswolds.—This breed is one whose exhibition is in a very few hands, prominent amongst them being the Messrs. Earne, whose senior, Mr. R. Earne, is amongst the long list of prominent breeders of British stud stock, whose demise we mourn this year. He was a man of rare good qualities and of sterling honesty, one of the rare old British yeoman type, whose genial companionship and sound advice will be greatly missed. This year's show-yard compilation for this breed is headed by Mr. R. Swanwick, who comes out on top with 8 first, 5 second and 6 R. N. prizes to his credit, at four shows. In the compilation for 1894 he was fifth; in 1895, not included; in 1896, third; in 1897, sixth; in 1898, first; and in 1899, third. Messrs. R. & W. T. Earne are second this year, with 5 first and 3 second prizes to their credit, at three shows. In 1894 and 1895 they were first; in 1896, 1897 and 1898, second, and in 1899, first. Mr. T. Walker, who comes third this year, with a record of 3 first prizes at one show, was not included in either of the years between 1894 and 1899. Mr. W. Houlton, fourth this year, with 2 second, 2 third and 1 R. N. prizes to his credit, at two shows, is likewise unnamed in the other years included in this record.

Lincolns.—With the exception of the years 1896 and 1897, Mr. Henry Dudding, whose achievement of selling by auction, in three years, two single shearing rams at 1,000 guineas each, holds a record unequalled by any living breeder of Lincolns. He has each year since 1894 held easily the leading place in the show-yard competition, his record during the present season being 7 champion, 18 first, 15 second, and 4 third prizes, at six shows, the only ones at which entries were made. Messrs. R. & W. Wright take the next place, with 1 champion and 2 R. N. for champion, 5 first, 8 second, 4 third and 1 fifth prizes, won at four shows. They were third in 1894, fifth in 1895, first in 1896, second in 1897, third in 1898, and fifth in 1899. Messrs. S. E. Dean & Son come in third this year, with 6 first, 9 second and 1 third prizes to their credit, at five shows. They were not included in the compilation of 1894, and were seventh in 1895, third in 1896, first in 1897, second in 1898, and third in 1899. Mr. Tom Casswell, who comes fifth this year, with 2 R. N. for champion, 3 first, 1 third and 2 R. N. prizes, won at three shows, was not in the compilation for 1884, 1896 and 1897, but was sixth in 1895, seventh in 1898, and second in 1899. Amongst other breeders whose names have been frequently mentioned in the prize records during the period named, and whose names are included in this year's record, are

Messrs. J. Pears, J. E. Casswell, H. Goodyear, and H. Smith, Jr.

Queford Downs.—Amongst this breed there has been great variation during the past nine years. Messrs. A. Brassey, J. Treadwell and G. Adams have for a time retired from the show-yard, and this is the reason why their names are missed in one of the years we refer to. Mr. W. A. Treweek heads the list this year, with 2 champion, 9 first, 3 second, and 2 third prizes, won at five shows. His name does not come into the compilations until 1898 and 1899. In the former year he was fourth and in the latter first. Mr. J. C. Eady takes second place this year, there being 1 champion, 4 first and 4 second prizes to his credit at three shows. He was second in 1894, 1895, 1896, 1897, 1898, and first in 1898. Mr. J. T. Hobbs takes third place this year, with 5 first, 1 second, 1 third and 4 R. N. prizes, at five shows. In 1888 he was fifth and 1899 third. Mr. R. W. Hobbs, who comes in fourth this year, with a record of 4 first, 5 second and 1 R. N. prizes, has, though his flock is an old one, never before been so prominent in the show-yard, whilst, for the reasons above, the names of Brassey and Treadwell are not given in the compilation, though both of these have successfully exhibited during the period included in our review.

Shropshires.—Mr. R. P. Cooper takes precedence in this year's compilation, there being to his credit 1 champion, 15 first, 13 second, 7 third, 1 fourth and 10 R. N. prizes, won at sixteen shows. His name was tenth in the 1894 compilation, second in 1895, seventh in 1896, tenth in 1897, third in 1898, and fifth in 1899. Mr. A. E. Mansell, whose noted flock, it may be mentioned, will be dispersed in its entirety next September, on account of its owner having decided to settle in Tasmania, comes in second in this year's record with 2 champion, 7 first, 9 second and 1 fourth prizes, won at five shows. He was first in 1894 and 1895, fourth in 1896, first in 1897, second in 1898, and third in 1899. Mr. A. E. White, who takes third place this year with 2 champion, 8 first, 6 second and 4 third prizes, at three shows, all Irish, is not included in any previous compilation. Fourth and fifth places in this year's compilation are occupied by Messrs. J. Ratcliffe and J. Kinworthy, who owe their prominent place to success at the smaller shows. Next comes Mrs. M. Barrs, with a good record of 7 first, 11 second, 6 third and 4 R. N. prizes, at seven shows. She was third in 1894, fifth in 1895, second in 1896, fourth in 1897, eighth in 1898, and first in 1899. Mr. A. Tanner comes next, with a record of 7 first, 10 second, 2 third and 4 R. N. prizes, won at seven shows. He was ninth in 1894, not in 1895, twelfth in 1896, seventh in 1897, sixth in 1898, and second in 1899.

Southdowns.—Mr. W. Toop takes first place in this year's compilation with a record of two champion, 8 first, 5 second and 2 third prizes, won at four shows. He was third in 1894, 1895, 1898 and 1899, second in 1897, and sixth in 1896 compilations. The Pagham Harbor Co. takes the second place this year, with 3 champion, 5 first, 4 second, 7 third and 3 fourth prizes to their credit, won at five shows. They were fourth in the list in 1894 and 1896, second in 1895, seventh in 1897, and first in 1898 and 1899. T. N. Holgen, with three champion, 5 first, 3 second, 2 third and 3 R. N. prizes, comes in for third place, won at four shows this season. The first appearance of this name was in 1896, when it was ninth; it was fourteenth in 1897 and tenth in 1898. Earl Cadogan takes fourth place, with a record of 3 championship, 7 first, 2 second and 2 third awards, won at seven shows. In 1897 this flock was tenth in the list; in 1898, fourth, and in 1899, sixth. The Earl of Ellesmere takes fourth place this year, with a champion, 7 first and 2 second prizes, at six shows. This flock was twelfth in 1895, thirteenth in 1896, sixth in 1897, seventh in 1898, and fourth in 1899. Col. McCalmont, M. P., takes sixth place this year, with a champion, 7 first, 6 second and 7 R. N. prizes, won at 11 shows, a considerable improvement upon the 1899 record, when he occupied the eleventh place.

Suffolk.—The Earl of Ellesmere occupies the first place in this breed this year, with a record of 5 champion, 14 first, 15 second and 3 third prizes, won at five shows. A like position His Lordship occupied in the years 1895, 1897, 1898 and 1899, whilst he was second in 1894 and 1896. H. E. Smith, son of Mr. J. Smith, who has the old flock of his father, comes in second in the list this year, a like position to that which he occupied last year. Major E. W. Baird takes third place this year, with 4 first, 2 second and 1 third prizes to his credit, at four shows.

Hampshire Downs.—Mr. James Flower heads this year's record, with 3 champion, 15 first and 8 second prizes, won at five shows, a similar position to which he occupied in 1895, 1896, 1897 and 1899, whilst he was second in 1894 and third in 1898. The Earl of Carnarvon comes in for second place this year, with a record of 2 champion, 8 first and 6 second prizes, at five shows. This flock was tenth in the record for 1896, sixth in 1897, first in 1898, and seventh in 1899. T. F. Buxton takes the third place, with 2 champion, 7 first, 6 second and 3 third prizes, won at four shows. He was first in 1894, third in 1895, fourth in 1896, 1897 and 1898, and third in 1899. W. B. Greenfield, who comes in fourth this year, with a record of 4 first, 2 second, and 4 third prizes, at five shows, was eighth in 1897, sixth in 1898, and ninth in 1899.

Kent or Romney Marsh.—F. Neame takes precedence this year, with 2 champion, 7 first, 2 second and 2 third prizes, won at six shows. He was tenth in 1895, second in 1896, fourth in 1897, and fourth in 1898. W. Mullen takes second place, with a record

for the year of 6 first, 6 second and 2 third prizes, at four shows. He was third in the 1894 list, first in 1895, 1896, 1898 and 1899, and second in 1897. C. File comes in for third honors this year, with a record of 1 champion, 4 first and 2 second prizes, won at three shows. He was fourth in 1894, then retired for a time from show-yard contests, and came out in 1899, taking third place in the record.

Dorset Horn.—W. R. Flower takes precedence in this section, with 1 champion, 3 first and 4 second prizes, at two shows, a position he has occupied each year since 1894, except in 1897, when Col. McCalmont came out very strong with a flock now dispersed.

The record of the Scotch breeds is also available, so far as it concerns the larger shows in that country, but from the fact that in the early years of the record these were not closely booked, we refrain from including them.

Minnesota Station's Exhibit at Chicago.

AGES, WEIGHTS AND GAINS OF ANIMALS.

The competition between the U. S. experiment stations in live stock at the Chicago Fat Stock Show was taken part in by Iowa, Wisconsin, Michigan, and Minnesota. In classes where competition was open to the world, the Minnesota Station won the following premiums: Shorthorn steer calf, first prize, \$60; grade yearling steer, fourth prize, \$10; Southdown wether yearling, first prize, \$15; champion Southdown wether, \$25; Tamworth sow under one year, first prize, \$12; same, second prize, \$8; champion Tamworth sow, \$20; pen of five barrows, 250 to 350 pounds, first prize, \$25; same, third prize, \$10; pen of five barrows, 200 to 250 pounds, third prize, \$10; pen of five barrows, bacon, 150 to 225 pounds, second prize, \$15; champion pen of five barrows, \$25; total, \$235.

Out of a thousand dollars in premiums offered to experiment stations, the Minnesota University Experiment Station won \$600, as follows: Yearling steer, second prize, \$30; yearling steer, third prize, \$20; calves, first, second and third prizes, \$50, \$30 and \$20, respectively; best five head of steers or spayed heifers, \$100; yearling wether, \$30; champion wether, \$40; barrow under one year, third prize, \$10; champion barrow, \$40; best general exhibit, \$200.

The cattle exhibit from this Station, consisted of five animals—two yearlings and three calves. The yearling steer, Robert Bruce, a grade Shorthorn, age one year, eight months and nine days, weighed 1,480 pounds, making a gain of 2.39 pounds per day from birth. During the last three months the daily gain was 2.83 pounds. Golden Crown, also a grade Shorthorn steer, age one year, seven months and eight days, weighed 1,330 pounds, making a gain of 2.27 pounds per day from birth. During the last three months the daily gain was 2.38 pounds. Golden Robe Jr. is a pure-bred Shorthorn steer; age eleven months, two weeks; weight, 1,055 pounds; daily gain since birth, 3.03 pounds; daily gain last three months, 2.70 pounds. White Lily is a grade Shorthorn heifer, spayed; age eleven months, two weeks; weight, 995 pounds; daily gain since birth, 2.85 pounds; daily gain the last three months, 2.09 pounds. Black Prince is a Shorthorn Aberdeen-Angus steer; age one year, one month and seven days; weight, 1,007 pounds; daily gain from birth, 2.50 pounds; daily gain the last three months, 2.16 pounds.

They were fed a grain ration of bran and oats, equal parts, from April 19 to Aug. 1, at the rate of about one pound to each hundred pounds weight of animal. They were also fed about six pounds of roots per day for the two weeks after they came; the roots then gave out. The hay was timothy and clover. They were out at nights on grass from the end of May till the middle of August. They were fed green food in the stable as soon as it could be cut, viz., oats and peas, and oats and vetches, and later green corn, which was fed twice a day. They received some hay all the time. About August 1 some corn was added to the grain ration, and occasionally some barley. Some boiled food, as peas, oats and barley, was fed about five times a week during August and September. September 10 the green food was stopped and some eight pounds of mangels a day were fed. Since September 1 the corn in the grain ration has been increased. For the last two months a little oil cake was fed. The calves suckled all summer, and at no time were they fed as much corn as the yearlings; otherwise they were fed much the same. A portion of these cattle were bred in Canada.

The swine exhibit consisted of twenty-seven animals, all bred at the Station. Of these, eight were Tamworths, six were Yorkshires, and thirteen cross-breds. The average weight of the six Tamworth barrows was 272 1/4; average age, 229 1/2 days. They made an average gain of 1.194 pounds per day from birth. The average daily gain the last three months was 1.69 pounds. The two Tamworth sows were 238 days old and averaged 244.5 pounds in weight. From birth they made a gain of 1.028 pounds per day, while their gain during the last months was 1.445 pounds per day. The average weight of the six Yorkshires was 268 pounds; average age, 209.7 days; average daily gain since birth, 1.277 pounds; average daily gain last three months, 1.727 pounds. The average weight of the ten cross-bred pigs was 258.45 pounds; average age, 217.8 days; average daily gain since birth, 1.187 pounds; average daily gain during the last three months, 1.64 pounds.

Smithfield Show.

England's great annual Fat Stock Show was held Dec. 10th to 14th, a grand show all round and one whose chief point for remembrance will be its general high quality, for its entries were less than in the more recent years. The result of the fewer entries was a much more level entry, the tail end of the several classes being much nearer the merit and quality of the tops, this being very noticeable in respect to the sheep section of the show, a brief résumé of the more salient features of which has been compiled from personal observation and careful examination by him who has the privilege and honor to represent your greatly appreciated paper in the Old Country, who with this letter takes the opportunity to wish it and its numerous readers a grand, prosperous and successful New Year—the first of the new century. Each breed of cattle, unless otherwise stated, was classified as follows: Steers not exceeding 2 years, steers exceeding 2 years and not exceeding 3 years, and heifers not exceeding 3 years.

The *Hereford* entries present numbered 5, 8, 3, their average daily gains being 2 lbs. 1.21 ozs., 1 lb. 15.65 ozs., and 1 lb. 9.95 ozs. The *Shorthorn* entries present numbered 12, 7 and 5, and their average daily gains were 2 lbs. 1.50 ozs., 1 lb. 13.56 ozs., and 1 lb. 13.02 ozs. The *Aberdeen-Angus* entries present numbered 5, 7 and 6, and their average daily gains were 2 lbs. 2.21 ozs., 1 lb. 13.19 ozs., 1 lb. 8.84 ozs. The *Galloway* entries present numbered 5, 4 and 4, and their average daily gains were 1 lb. 13.35 ozs., 1 lb. 9.90 ozs., 1 lb. 4.74 ozs. The *cross-bred* cattle entries present numbered 12, 7, 6 and 4, and their average daily gains were 2 lbs. 2.27 ozs., 1 lb. 14.41 ozs., 2 lbs. 10.10 ozs., and 1 lb. 11.24 ozs., the classification in this section being for steers not exceeding 2 years, steers exceeding 2 years and not exceeding 3 years, and two similar classes for heifers.

The champion beast of the show was Mr. John Wortley's *Hereford* steer, which, at the age of 937 days, gave an average daily gain of 2 lbs. 1.24 ozs. He won the breed cup of his breed, cup for best ox or steer, and, as noted above, the championship as best beast in the show. At the *Norwich* Show he was R. N. for champion to Mr. Learner's cross-bred heifer, and came in behind her also at *Birmingham*. Mr. Learner's heifer champion at *Norwich*, R. N. to Her Majesty the Queen's heifer at *Birmingham*, came in as R. N. for the champion, ship here; she also won the breed cup of her breed and cup for best cow or heifer in the show. At 1,034 days of age she gave an average daily gain of 1 lb. 7.68 ozs.

The R. N. for best ox or steer was Capt. H. L. Townshand's cross-bred steer, which was R. N. to Mr. W. E. Learner's heifer; for the cross-bred breed cup he took first in his class, and at 1,037 days old gave an average daily gain of 1 lb. 14.73 ozs. Her Majesty the Queen's heifer, Cicely, which was *Birmingham* champion, came in here R. N. for best heifer, and took first in her class, the *Shorthorn* breed cup, and Her Majesty's own cup for the best best bred and fed by the exhibitor, which cup, having been won by the Queen last year, goes absolutely to Windsor; this excellent heifer's daily gain at 1,012 days being 1 lb. 12.55 ozs. Mr. John Ross won the cup for best beast under two years old with his cross-bred heifer, which was first in her class, and gave an average daily gain at 710 days of age of 2 lbs. 0.12 oz., the R. N. for this cup being Mr. George Bruce's under-2-years-old *Aberdeen-Angus* steer, which, in addition to this honor and his first prize, won also the breed cup of his breed, showing an average daily gain at 693 days old of 2 lbs. 3.73 ozs.

The R. N. for the best best bred and fed by the exhibitor went to the Earl of Strathmore's *Aberdeen-Angus* heifer, which won first in her class and R. N. for the breed cup, her average daily gain at 1,058 days being 1 lb. 6.54 ozs.

In the sheep section two classes were allotted to each breed, one for wether lambs under 12 months, and the other for wethers exceeding 12 months and under 24 months.

The *Leicesters* numbered 4 and 4 entries present, and their average daily gains were 10.59 ozs. and 6.78 ozs. *Border Leicesters*—The entries present were 2 and 1, and their average daily gains were 10.24 ozs. and 5.29 ozs. *Cotswolds*—There were present one entry in each class, showing the average daily gains of 10.32 ozs. and 7.19 ozs. *Lincolns*—The entries present were 4 in each class, and their average daily gains were 10.31 ozs. and 8.32 ozs. *Southdowns* had present 13 and 10 entries, and their average daily gains were 7.76 ozs. and 4.85 ozs. *Hampshires* had 11 and 5 entries present, and their average daily gains were 10.26 ozs. and 6.39 ozs. *Suffolks* had 9 and 4 entries present, and their average daily gains were 10.79 ozs. and 7.10 ozs. *Shropshires* had 6 entries present in each class, and their average daily gains were 9.54 ozs. and 6.19 ozs. *Oxford Downs* had 5 and 2 entries present, and their average daily gains were 9.67 ozs. and 6.49 ozs. *Dorset Horns* and other short-wools had 5 and 2 entries present, their average daily gains being 9.42 ozs. and 5.07 ozs. *Cross-breds* had 8 and 5 entries present, and their average daily gains were 10.85 ozs. and 7.25 ozs.

The Prince of Wales' challenge cup was won, for the second year in succession, by Lord Ellesmere, who thus wins the cup outright, with his pair of *Suffolk* wethers, which also won their first class prize, breed cup and champion cup for best pen of short wools in the show, their average daily gain being 7.79 ozs. at 654 days old.

For the R. N. for the Prince of Wales' cup, Mr.

J. Pears' *Lincoln* wethers, the winners of the Liverpool champion cup, were selected. This was the heaviest pen of sheep in the show, 10 cwt. 11 lbs., and gave an average daily gain of 9.12 ozs. at 661 days of age.

The R. N. for the short-wooled champion cup was the Duke of Richmond's *Southdown* wethers, which won their breed cup and first in their class, their average daily gain at 640 days old being 4.67 ozs.

The R. N. for the long-wooled champion cup were Mr. H. Dudding's first-prize pen of lambs, which, had they been judged entirely from a breed point, were decidedly the best type of their breed in the show. They showed at 296 days of age the average daily gain of 10.32 ozs.

The other breed-cup winners were as follows: *Leicesters*, Mr. E. F. Jordan's wethers, whose daily gain at 600 days was 6.83 ozs.; *Border Leicesters*, the Earl of Roseberry's wether lambs, whose daily gain at 250 days was 10.54 ozs.; *Cotswolds*, Mr. F. Craddock's wethers, whose daily gain at 623 days was 7.19 ozs.; *Hampshire Downs*, Mr. T. F. Buxton's lambs, whose daily gain at 317 days old was 12.23 ozs.; *Shropshires*, Mr. P. L. Mills' lambs, whose average daily gain at 275 days old was 10.18 ozs.; *Oxford Downs*, Mr. H. W. Stilgoe's lambs, whose average daily gain at 320 days old was 9.50 ozs.; *Dorset Horns*, Mr. James Toop's lambs, whose average daily gain was 9.33 ozs. at 341 days old, and cross-breds, Mr. F. I. Mathews' wethers, whose average daily gain was 7.36 ozs. at 647 days old.

The highest daily gain in the cattle section was a cross-bred steer shown by Mr. J. D. Fletcher, and R. N. in its class, whose daily gain was 2 lbs. 8.33 ozs. at 626 days old. The highest daily gain in the wether classes was that of Mr. J. Pears' pen of *Lincoln* wethers, 9.12 ozs. at 651 days, and the highest daily gain in the lamb classes was that of Mr. W. H. Gibbing's *Devon* long-wool lambs, 12.50 ozs. at 275 days of age.

The carcass classes were of great interest, the champion prize and its R. N., both in the cattle and sheep sections, going to the younger classes, which is indicative of the value, from a butcher's point of view, of early maturity.

In the steer class not exceeding 2 years there were four entries, whose aggregate age was 2,390 days, their live weight 5,182 lbs., their carcass weight 3,327 lbs., which equals 68.21 per cent. of live weight, the average daily gains being 1 lb. 13 ozs. of live weight and 14.13 ozs. carcass weight.

Seven entries formed the class for steers exceeding 2 years and not exceeding 3 years, their aggregate age being 6,325 days, their live weight 9,620 lbs. and their carcass weight 6,059 lbs., which equals 62.94 per cent. of live weight, the average daily gains being 1 lb. 8.33 ozs. of live weight and 15.32 ozs. of carcass weight.

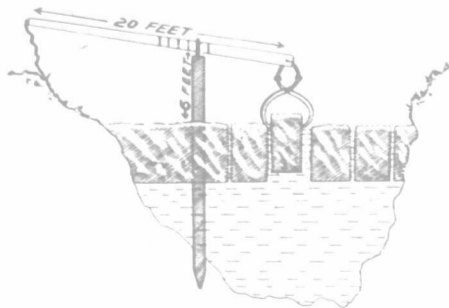
There were four entries in the heifer class not exceeding 3 years, whose aggregate age was 3,775 days, with a live weight of 5,186 lbs. and a carcass weight of 3,221 lbs., which equals 62.37 per cent. of the live weight, the average daily gains being 1 lb. 5.95 ozs. live weight and 13.55 ozs. carcass weight.

There were eight entries in the long-wooled lamb class, their aggregate average age being 2,048 days, their live weight 977 lbs. and their carcass weight 561 lbs., which equals 57.42 per cent. of the live weight, the average daily gains being 7.64 ozs. of live weight and 4.38 ozs. of carcass weight. The yearling wether class of long-wools numbered seven entries, whose aggregate age was 4,283 days, with an aggregate live weight of 1,111 lbs. and carcass weight of 689 lbs., which gave a percentage of 62.01, their average daily gains being 4.15 ozs. of live weight and 2.57 ozs. of carcass weight. The short-wool lamb class had an entry of twelve, with an aggregate age of 3,534 days, a live weight of 1,760 lbs. and a carcass weight of 1,065 lbs., which gives a percentage of 61.64, the average daily gains being 7.97 ozs. live and 4.90 ozs. carcass. The yearling wether class had an entry of six, whose aggregate age was 3,886 days, with a live weight of 1,120 lbs. and a carcass weight of 689 lbs., which gives a percentage of 61.51, and the average daily gain of 4.61 ozs. live and 3.60 ozs. dead.

The swine show was a thoroughly good one in the open sections of the show, but there is not at present any carcass test for these animals.

Contrivance for Lifting and Loading Ice.

SIR,—This contrivance consists of two stout poles, one 20 ft. long, the other long enough to be driven in bottom of stream and protrude 6 ft. above surface of ice. The twenty-foot pole pivots on the upright by means of a pin in upper end of upright,



ICE LOADER.

and having several holes, it can be moved to suit the ice-hole. The grips are fastened to butt end, and a rope to small end. Large cakes can be easily lifted and loaded with this. I saw it used in Quebec.

L. W. EATON.
Macdonald Municipality, Man.

Ontario Beekeepers' Association Annual Meeting.

The Ontario Beekeepers' Association met in twenty-first annual convention in the Town Hall, Niagara Falls, Ont., December 4th, 5th and 6th. President C. W. Post occupied the chair. In his address, the President referred to the partial failure of the honey harvest in 1900, and mentioned the successful exhibit of Ontario honey at the Paris Exposition; also raising the question of exhibiting at the Pan-American Exposition. He recommended that the Association discuss a form of beekeepers' union.

Mr. R. H. Smith, St. Thomas, read a paper on "Moving Bees to Fall Pasture." With him there is very little honey flow after August 1st, breeding stops, and by winter the hives have only old bees and no stores. To avoid this, he moves bees to a section where buckwheat is grown. The whole top and the entrance of each hive are left open and covered with wire screens. Every precaution is taken to prevent the escape of a single bee. The wagon has springs, and a platform holding about 30 hives, placed with frames crosswise of the load.

Mr. Dickson, Lancaster, in a paper on the production of extracted honey, recommended tiering up supers on the hive as one would comb honey, and using bee-escapes to take it off. His honey room is kept at a very high temperature, and the honey is exposed in shallow vats to ripen it still further. Mr. Newton said that with escapes the honey gets too cold before being extracted. Mr. Hall would not expose honey in vats, but would can it up at once to preserve the aroma. He also mentioned the S. T. Pettit system of removing honey from the extracting supers as being far ahead of any other system he had tried.

"Wintering Bees in and Out," by Mr. H. G. Sibbald, Cooksville, introduced a lively discussion on outdoor packing. While many other non-conductors are good, forest leaves are given a slight preference. Bees packed in long clamps sometimes drift from one hive to the other in spring, weakening some and making others inordinately strong, says Mr. J. D. Evans. Mr. Sibbald's cellar arrangement is similar to the Pettit system, which has been fully described in these pages.

Mr. W. J. Craig, editor of *Canadian Bee Journal*, on "Uses and Abuses of Bee Literature," mentioned the importance of literature on any subject, and raised the question, "Should the editor edit?" Every new idea should be carefully considered before being published. Crop and market reports should be edited so that exceptional yields might not give a misleading impression of the general outlook. Standard and current bee literature should be more generally read. Hobbies should not be ridden through the editor's sanctum.

Mr. M. B. Holmes, Athens, read a paper on "Queens," showing that beekeepers, like stockmen, should select always from their best stock. This point can scarcely be too much emphasized.

In the absence of Mr. E. A. Converse, Mr. Hershiser, of the Pan-American Exposition Board, informed the convention that the erection of a separate apiarian building is contemplated, and desired to know what arrangements the Ontario exhibitors wish. The matter was left in the hands of the Executive Committee of the Association.

Prof. Harrison, of the Ontario Agricultural College, gave an address on the subject of "Foul Brood Germs." Briefly, the symptoms of this dread disease are: Larva in unnatural position in the gells; bees inactive; larva become flabby and die, then turn brown and "ropy." Dead larva dries down in the cell, leaving a brown scale. Bad smell is noticed in the hive, and bees are seen fanning at the entrance. If the brood has been capped, the cappings turn darker, and a pinhole appears in each. Even the ovaries of the queen are effected. Operators may carry the disease from one hive to another.

Mr. W. Z. Hutchinson, Flint, Mich., editor *Beekeepers' Review*, read a valuable paper on "How Little Neglects Affect the Profit of the Apiary." Ours is a business of details. We must understand our location, know when to expect the harvest, and be ready. Bees need attention winter and summer. Don't neglect anything. Have a place for everything, and everything in its place. Don't waste. Don't have more business on hand than you can attend to. Indolence and procrastination are the root of much evil.

One of the most interesting features of the convention was an address, with stereopticon views, by Mr. E. R. Root, Medina, O., editor of *Gleanings in Bee Culture*, on "Beekeepers I Have Met, and Apiaries I Have Visited."

Mr. John Fixter, of the Experimental Farm, Ottawa, described a series of experiments on wintering bees in different repositories.

Prof. Fletcher, Entomologist and Botanist at the Central Experimental Farm, Ottawa, gave a very able and scholarly address on "The Value of Bees in Orchards," even a brief outline of which could not be given in the space allotted to this report.

QUESTION DRAWER.

Q. What is the best race of bees?

A. A cross between Italians and common blacks. Some prefer Carniolans.

Q. What is the best sized hive?

A. Various opinions: from 8-frame to 10-frame Langstroth or its equivalent.

Q. Which is preferable to cover frames, a quilt or honeyboard?

A. Many leading men favored a honeyboard, but the majority voted for the quilt.

Q. Give hints on marketing honey.
A. Put it up in clean, attractive form: comb honey in glass-faced, no-drip crates, with glass exposed so trainmen can see it is fragile; extracted in 60-lb. tins, crated. Do not make unnecessary distinctions between various kinds of No. 1 white honey. That has already been overdone.

Officers for 1901.—President, John Newton, Thamesford; 1st Vice-President, J. D. Evans, Islington; 2nd Vice-President, Jas. Armstrong, Cheapside; Secretary, Wm. Couse, Streetsville; Treasurer, Martin Emigh, Holbrook; Foul-brood Inspector, Wm. McEvoy, Woodburn; Assistant Inspector, F. A. Gemmill, Stratford.

The next place of meeting will be Woodstock.

The Dying Century.

Into the void and vast,
Into the shrouded past,
Crowned with his years at last,
Gazes the century.
Lo, how the shadows fall!
Soon now the solemn call:
Soon bier and hearse and pall—
Hail and farewell to thee!
Last of the pilgrims gray,
Holding their measured way
Into the dim for-aye,
Honored thy passing be.
Age of earth-girdling power,
Age of fair freedom's dower,
Age of life's bloom and flower,
Thou hast reigned graciously.

—James Buckham, in *Lestic's Weekly*.

Geese on the German Market.

The domestic goose holds about the same honored place in the nutritive economy of Germany that the more delicately flavored and patrician turkey does in that of the United States, according to Consul-General Frank Mason, at Berlin, in a recent communication to the Department of State. It is the standard luxury of the German people, he says, and during nine months of the year forms the principal feature of the table at festive as well as everyday entertainments. Notwithstanding the fact that great numbers of the birds are bred and fattened on German farms, and that every German village has its flock of geese, the home-grown supply falls far short of the constant demand, and leaves a large deficit to be filled by importations, mainly from Russia. The season for that traffic is now at its height, and a special goose train of from fifteen to forty cars brings an average of 15,000 birds from the Russian frontier each day and drops them at Rummelsburg station, Berlin. Immediately after their arrival, the whole trainload undergoes an exceedingly rigid inspection. If a single goose has died en route, or is found with a contagious ailment, the whole carload is placed under quarantine for eight days. Another death or discovery of disease during that period means eight days more of detainment, at a cost of about \$476. The obvious object and effect of this system is to render the introduction of diseased birds such a costly venture as to make it absolutely ruinous to the perpetrators. The aggregate wholesale traffic in geese at Berlin is placed at \$2,000,000 annually.

"To the ordinary observer," says Consul-General Mason, "all geese are very much alike, but the expert dealers here divide the Russian birds, which now command the Berlin market, into twenty-one different breeds and categories, according to species, age, size and condition, wholesale prices varying from forty-three to sixty cents each, though these prices advance with those of other poultry as the season lengthens from autumn into winter, the grand climax of the trade being just before and during the Christmas holidays, when geese in every form, from plain "gansbraten" of the laboring classes to the pate de foie gras of the epicure, dominates the tables of the festive season."

On Hens Eating Their Eggs.

I frequently notice among the poultry articles in the *ADVOCATE* inquiries for "patent nests" to stop the hens eating their eggs. Many years ago I made the same inquiry, but I think I solved the problem when I began to save every eggshell I could from the time the spring sets in, and I allow my hens their liberty until frost comes, and they are confined again. By this time I have two or three boxes of nicely-dried and broken-up shells, which I begin to feed to them then, two or three handfuls a day scattered well among their straw. It is the rarest thing to find one of the hens touch an egg unless I accidentally break one in the house. **TRIX.**

Mold in Butter.

Prof. G. L. McKay, of the Iowa Dairy School, who judged the dairy products at the Winnipeg Industrial last July, in a recent interview regarding mold in butter, said: "In the first place, we do not know what moldy butter is at the College creamery. We have never had any of it here. Our butter has gone to several of the large markets in this country, and across the water, and there has never been a complaint of mold. I attribute a good deal of the trouble to parchment paper. This is because it is improperly cared for. Many creameries keep the paper in a damp place and the germ that produces mold is started there; then when it comes in contact with the moist butter it grows rapidly. If the paper was taken out only as wanted, and the balance kept in a clean, dry place, there would probably be less trouble with mold."

Celery Culture in Red River Valley Soil.

T. A. Hoverstad, superintendent of the Crookston Experiment Farm, has the following to say in the *Farm Student's Review* on the cultivation of celery in the heavy clay soil of the Crookston station: During the past several years celery has been grown on the trial grounds of the Experiment Farm at Crookston. The success each year has given evidence that the Red River Valley is peculiarly adapted to the best development of this most desirable garden vegetable. Comparing the quality of the home-grown product with that imported from the neighboring and more distant States, we find cause for great encouragement. The celery was free from rust. The clay soil peculiar to this region seems well adapted for its growth. The two conditions, abundance of moisture and cool weather, which are so favorable for the highest development of celery, are to be found here.

Only the old, well-known ways have been practiced in its care and management. The grounds have been manured in the fall with well-rotted manure, which has been plowed down deeply. The plants are started in hot-beds and transplanted into the garden by the 1st of June or later. The best success has been attained by banking it up with dirt. In the fall straw has been put over the plants to keep them from freezing. With this protection they can be kept in the garden until late in the fall. Later they have been moved into the cellar, their roots being put into moist sand. Our experience this fall shows that celery will do well even in a season of very excessive moisture. Part of the crop was growing in mud and water for several weeks. While this is not the ideal condition, it showed that celery can be produced of good quality even under adverse circumstances.

QUESTIONS AND ANSWERS.

Veterinary.

TOBACCO POISONING.

H. L., British Columbia:—"I should be very much obliged if your veterinarian would tell me, through the *FARMER'S ADVOCATE*, what killed two steers? I went out in the morning and found two 2-year-old steers dead, or nearly so. They had a little froth coming out of the nostrils. Occasionally a large bubble would come out. One bled on being cut in the nose, but I couldn't find any other signs of life. They were considerably bloated. I let the wind out of one, but it did no good. The day before they got into the shed where the tobacco was curing and ate some of the leaves that had been frozen before being cured, and were in a rotten state. I opened one and found the large stomach very full of food, also pieces of tobacco leaves. The kidneys were rather spongy-looking (I am not sure if that is normal). The intestines were nearly empty. There was a bluish tinge at the top of the lungs. Everything else seemed all right. The animals were in good order. They were running in a field with other cattle, and were in good health the day before. None of the other cattle were ill, and as far as I know did not get any tobacco. In the one we opened, I should say not more than a dozen leaves were in the stomach—perhaps not so many. If you think tobacco killed them, what part did it effect, and could anything have been done to save them if they had been found earlier? The animals did not get cold for hours after apparently dead; in fact, the one I opened was warm the next day."

[Tobacco is a narcotico-acrid poison. It has a paralyzing effect on the brain, but the opposite or tetanizing, effect on the spinal cord. The symptoms of tobacco poisoning in cattle are: Elevated temperature, quickened pulse, breathing more or less oppressed, coldness of the extremities, dilatation of the pupil, grinding of the teeth, great restlessness, stomach distended with flatus, groaning, convulsions. The antidotes for tobacco poisoning are: The stomach pump; diffusible stimulants, such as alcohol and ammonia; nux vomica, judiciously administered. It is quite probable that the tobacco caused the death of your steers.

W. A. DUNBAR, V. S., Winnipeg.]

SUSPICIOUS LUMPS ON HEIFER'S NECK.

C. D. E., Lanark Co., Ont.:—"A lump appeared on the glands of the neck of a two-year-old heifer about a month ago, and it gathered and discharged, but the lump has come again, and there is a lump under her neck—that is, in her throat; these lumps are not fastened to the bone. Do you think this is lump jaw, or does it start on the bone?"

[The symptoms given are suspicious of lump jaw, but not definite. The bone in this disease is not always primarily affected; in fact, sometimes not at all. When the lumps are in the soft tissues, as you describe, they can be removed by a careful operation, and this in many cases effects a permanent cure. The reappearance of the lumps makes the case more suspicious. I would advise isolation of the heifer until a definite opinion of the trouble be formed. It might be wise to call in a veterinarian, and it may be he would operate. If ordinary abscesses they should disappear after eruption. When these tumors burst and run pus for awhile, then heal and after a time form more pus, actinomycosis (lump jaw) is strongly indicated.

J. H. REED.]

SKIN DISEASE IN SOW.

G. H. S., Victoria Co., Ont.:—"I have a pure-bred Yorkshire sow about 19 months old that has some kind of a skin disease. It seems like some sort of a scurf, which makes her very itchy, and she rubs and scratches herself so as to make herself bleed, and it seems to prevent her from doing well. She has at present a litter of little pigs three weeks old, and I fear they are getting the same disease, as they seem to have a lot of scratching to do. I feed my sows on pulped turnips and potatoes, raw, before farrowing, and boiled roots thickened with shorts or chop. My pigpen is a frame one, double-boarded on the outside, with tar paper between, and then tar paper inside again, with an air space between, and then boarded on inside again, and a plank floor, with an elevated floor for them to sleep on. I also have a yard outside for them to run in when it is warm enough for them to be out. I noticed her getting very scurfy when she was five or six months old, but thought perhaps it would pass away. Can you tell me what it is, and what I can do for her, and whether it would hurt the pork if I fattened her?"

[Your sow is suffering from a form of eczema, which has become chronic, and I fear will be difficult and tedious to treat. I would advise the application of an ointment composed of one part carbonate of bismuth and six parts vaseline. Rub all affected parts well with this once daily. This treatment will be expensive. A less expensive treatment (but probably not as satisfactory) is to thoroughly wash her body with warm soap suds, removing all the scales that will come off without causing bleeding, and then applying once or twice daily the following liquid: One part creolin to 50 parts water. Besides local treatment, give a dessertspoonful of the following three times daily in her food: Equal parts sulphur, powdered charcoal, and Epsom salts. If her bowels become too loose, discontinue the Epsom salts. If the young pigs are affected, they should have the same local treatment, and after weaning, the same constitutional, of course giving smaller doses. If convenient, make a change of food for a few weeks, dispensing with the shorts. I do not consider that the flesh would be unfit for food.

J. H. REED.]

INDIGESTION IN COW.

G. Q., Huron Co., Ont.:—"Have a cow seven years old, which calved the last day of May, and is due to calve again on April 12th. She milked well all summer, and was always hale and hearty. About three weeks ago she bloated on the left side, frothed at the mouth, and seemed in considerable pain. We gave her a ball of tar about the size of a hen's egg, also some soda and ginger, and then called in the veterinarian, but when he arrived the swelling had all gone away. He gave her a physic, but it did not act. She bloated every day about noon for about a week, then we called the veterinarian again. He called it chronic indigestion, and gave a stronger physic this time, which acted in due time. She continued to bloat every day until the last few days, when she has been bloated almost continuously, always on the left side. She has a regular passage to her bowels, and manure is quite natural, but her appetite is gone, only eating a very little hay and a small quantity of bran. She continued to chew her cud until about two days ago, and still sweats on the nose, but eyes are very dull and ears hang down. We like your paper very well; it is a welcome guest twice a month."

[The veterinarian who visited your cow no doubt made a correct diagnosis, and followed the correct mode of treatment, as she is certainly suffering from indigestion. The symptoms given indicate that the trouble is caused by some foreign body (possibly a wool or hair ball, or a calculus) in some compartment of the stomach. If this condition exists she will probably die, especially if the obstruction be in the 4th stomach. If in the paunch it could be removed by an operation, but its presence can only be suspected, and it is not well to operate unless there be reasonable certainty of its existence and location. I would advise the use of tonics, such as 1 dram each of powdered sulphate of iron, nux vomica and gentian, and 2 drams bicarbonate of soda, given in a bottle of flax-seed gruel three times daily. Give a few bottles of gruel several times daily, say five or six times, to nourish her. If the bowels become constipated give about 1 lb. Epsom salts. Give a little of anything she will eat. If the trouble be caused by conditions other than those suspected, this treatment will probably effect a cure.

J. H. REED.]

CATTLE BLOATING.

H. VICTOR, Perth Co., Ont.:—"What is the cause of cattle bloating? They are getting three gallons of oat chop and two pails of turnips a day, and all the hay they want to eat."

[Bloating does not frequently occur in the case of cattle getting such food as is mentioned by Mr. Victor. It more often occurs when animals are turned onto fresh, damp or frozen clover, rape or other green food when in a hungry condition. It is due to the forming of gas in the paunch by reason of fermentation of the food eaten. When bloating occurs frequently, it indicates an unhealthy condition of the digestive system. We would not suggest any change in the feed, except, perhaps, to give the roots in three feeds and add bran to the chop. Free access to salt tends to have a good effect upon the digestive systems. A good treatment for a bloated animal is to administer 2 ounces of spirits of turpentine mixed with 1 pint raw linseed oil. Follow with bran mashes for a few meals.]

A TWIN AS A SIRE—MARE REFUSING OR UNABLE TO EAT—MARES OUT OF CONDITION.

H. E. B., Cumberland Co., Ont.:—"I have a very fine bull calf, a twin, that I am keeping for service. Will he breed or not, or would he be likely to get twin stock?"

"2. My neighbor has a mare that was very fat; all at once she commenced to fail, would not eat, failed in flesh very rapidly, got so weak that she had to be helped upon her feet. Is there any cure, or what is the cause?"

"3. I also have another mare, that first took sore under the throat. All at once she swelled in her limbs, under her belly, up behind to her tail, also her neck and her breast and in all her muscles. Her nose was swollen till it would hardly go into a water hole, and one of her eyes is closed up. What treatment would you prescribe for her?"

"4. My friend has a mare fifteen years old; has cribbed for a number of years; she took swelling under the throat, in lumps the size of a hen's egg, and all down her neck and down to her breast, and between the shoulder points. When she lies down she breathes with much difficulty. What is the cause, or is there any cure?"

[1. When twins are of different sexes, the female, called a "free-martin," generally has a masculine appearance; the female genital organs are supposed to be imperfectly developed, and as a rule she will not breed; still, there are exceptions. The male will be potent. When twins are of the same sex, they both make breeders. Your bull calf is therefore as likely to be a good sire as if he had been of single birth, and more likely to sire twins.]

2. In all probability there is something seriously wrong with the teeth or mouth of your neighbor's mare. Have her mouth carefully examined. If there be any long molars, have them shorn; if any decayed, have them extracted, and have all sharp points rasped down. If there be any foreign matter, as a bone or stick, between the two rows of molars, have it removed. If a molar be split, have the partially detached piece removed.]

3. From meager symptoms given, I would say that your mare is suffering from a form of erysipelas. Give a purgation of 8 drams Barbadoes aloes and 2 drams ginger, mixed with a little soap and made into a ball. Feed only bran until ball operates. Then give 3-dram doses powdered hyposulphite of soda, three times daily, either as a drench mixed with a little cold water or, if she eat fairly well, give the powders in dampened bran or boiled oats. Bathe the swellings well and often with warm water, and apply, after bathing, some camphorated liniment (which you will get from your druggist); be very careful to keep warm after bathing.]

4. The symptoms your friend's mare present are very peculiar. They indicate a serious disease of lymphatic glands, but I cannot say without more minute symptoms, constitutional as well as local, what the trouble really is. It is certainly a serious trouble, and as the mare is old, if not better by the time you see this, I would advise her destruction.]

J. H. REED.]

UNTHRIFTY FOAL.

A SUBSCRIBER, P. E. Island:—"I have a colt seven months old, weaned at three months. It ate well for a little while, and then lost its appetite; will only take a small quantity of water, and will eat a little hay and only take a bite of grain sometimes; has gone to skin and bones; is quite smart yet. What is best to give him?"

[It would seem to us that the colt's digestion has become badly impaired or deranged. We incline to the opinion the foal was weaned too young, and it may possibly be infested with worms. For fear the latter is the trouble, give a pint of new milk, mixed with two tablespoonfuls of spirits of turpentine, three successive mornings before it has had any other feed. On the fourth morning give one dram of tartar emetic in half a pint of raw linseed oil. In any case, the foal must be nursed up with easily-digested foods. Teach it, if possible, to drink new milk. This can usually be done by giving no water for twelve or more hours. Commence with a quart at a feed twice daily, increased to two or three quarts as the foal becomes accustomed to it. Give the milk warm, from a healthy cow not long calved. Give well cured hay (clover preferred), and boiled oats with bran. A handful of flaxseed boiled with the oats will give good results. Keep the colt in a comfortable, well-lighted box stall where it can move around freely.]

COLT'S FEET IN BAD CONDITION.

S. W. S.:—"Young driving horse, five years old, has been stabled and driven for about a year and a half. When first shod had apparently first-class feet, well shaped and all right up to about three or four months ago, when front feet commenced to break off around where nails were clinched, and at present time I cannot drive him; his feet are so that I cannot put shoes on. He has not been driven for four or five weeks. Feet do not seem to grow. Is lame when shoes are off. What treatment would you advise to make his feet grow?"

[Leave the shoes off; keep the horse in a roomy box stall, and allow the manure to remain, but keep a good supply of straw for bedding. Blister the coronet (just above hoof) with caustic balsam once a week, and apply a mixture daily to entire foot, of neat's foot oil and oil of tar, in the proportion of ten of the former to one of the latter. When feet are sufficiently grown out, have a blacksmith who understands his business apply properly-fitted bar shoes.]

HORSE TROUBLED WITH WORMS.

CRAZY SAM, Compton Co., Que.:—"Horse about eight years old, very thin of flesh, troubled with worms. His eyes seem to be joined somewhere to his jawbone, for every movement of the jaw when eating causes his eye to move in and out about half an inch or so. His eyes are sunken and look dull. Do you believe in giving ashes in feed for worms?"

[If, as you suspect, your horse is troubled with worms, it would account for his being low in flesh. As to the junction of jawbone and eye, there certainly is no direct union, but a very intimate relation at that part where the lower jaw articulates with the upper. The horse is probably one with naturally deep-set eyes, and the pad of fat upon which the eye rests is probably reduced in bulk by the lean condition of the animal, as all adipose tissue is lessened in such conditions. At the articulation mentioned there is a projection of bone pointing upwards into what is called the frontal fossa, which is connected with the orbital fossa (in which the eye is placed). When eating, each movement of the jaw causes a movement of this projection in the fossa, and it causes more or less movement of the eyeball. I would advise you to have the horse's teeth examined by a veterinarian and, if necessary, dressed. For worms, treat as follows: Give one dram each powdered sulphate of iron, sulphate of copper, tartar emetic and calomel, in damp food, every night and morning for 12 doses. After giving the last dose, allow nothing to eat for 8 to 10 hours, and then give a purgative of say 8 drams Barbadoes aloes, 2 drams ginger, given either shaken with a pint of cold water as a drench or mixed with sufficient treacle or soft soap to make it plastic and form into a ball. Feed nothing but a little bran, and give water in small quantities until the ball commences to act. I do not think a little ashes do horses any harm, probably little good.]

J. H. REED.]

MARE LOSING FLESH.

J. C., Saskatoon:—"I have a young mare four years old. I have not used her any these last three months. She is failing in flesh. I am feeding good, well-cured hay and oats twice daily and boiled grain once a day. Legs swell or stock. We have no vet. here. Is it likely to be the fever that is so prevalent in this part of the West? She does not appear to be feverish, and feeds well. Kindly prescribe."

[Your mare's ailment may possibly be the so-called "malarial fever," especially as it appears to be prevalent in your locality, but with the limited description of the case which you have furnished it is impossible to give a decided opinion as to its true nature. I would advise you to give the following aperient: Barbadoes aloes, four drams; calomel, forty grains; ginger (pulv.), two drams; syrup sufficient to form a ball. Before giving the ball, feed exclusively on bran mash for at least sixteen hours. Do not give any fodder until after medicine has ceased to operate. Follow up by giving, morning and evening, in food for two weeks: gentian (pulv.), two drams; nitrate of potass., one dram; chlorate of potass., one and a half drams; sulphate of iron, half a dram.]

W. A. DUNBAR, V. S., Winnipeg.]

WORMS IN COLT.

P. J. D., Hillesden, Assa.:—"Will you kindly let me know, through the Veterinary column of the ADVOCATE, how to treat a 7-months-old colt for worms? The colt has been running on the prairie, but is now taken from the mare and is fed in the stable, but is very dull and not thrifty, and passes worms."

[Give on empty stomach, in small bran mash, four mornings in succession: Santonin, 30 grains; calomel, 15 grains. Follow by giving 6 ounces of raw linseed oil and 1 tablespoonful of turpentine. After the foregoing treatment, give, morning and evening, in food for one week: Gentian, pulverized, half a dram; nux vomica, pulverized, 12 grains; soda bicarb., 1 dram.]

W. A. DUNBAR, V. S., Winnipeg.]

Miscellaneous.**SEEDING PRAIRIE TO GRASS.**

A. B., Winnipeg:—"I have a section of land near Winnipeg, consisting of wild prairie rolling land. The soil is alkali and clay loam. Water runs over the low places in the spring. I want to use it for cattle pasture and for hay fields. Is there any way of improving the quality of the grass, and of making it grow more densely, without plowing up the land? Would sowing grass seed over the unbroken prairie do any good? If so, what kind of seed would you advise me to use, and what is the best time for sowing?"

[We have repeatedly tried to grow cultivated grass on wild prairie land without breaking up the land, but invariably without success. We have found it absolutely necessary to break the land, between April and June, back-set before harvest, thoroughly disk in the fall, then sow the seed the following year and harrow thoroughly. The weeds are cut down during the summer with a mower, and by fall we have excellent pasture. We prefer Brome grass. It starts early in the spring, remains green late in the fall, and is very much relished by all classes of stock. Sow any time between the 1st of April and the 1st of June. Use 15 pounds of seed per acre.]

S. A. BEDFORD, Brandon.]

STRATIFYING PLUM PITS, ETC.

SUBSCRIBER, Regina:—"Would you answer a few questions for me, and oblige."

"I received some wild plum pits, and as I saw in a newspaper that stratification means that the seed be mixed with sand and put in the cellar, I did this last winter with some hazelnuts (native), and they nearly all moulded. I have always thought that the sand and seed should be outside."

"I have also some crab-apple seed that I do not want to make any mistake with, as the apples were grown here."

"I should also like to know whether the high-bush cranberries can be grown from slips in moist ground?"

"Do you know whether anyone has ever raised the Saskatoon berry in a garden? If so, do they grow any larger than in the bush?"

[The recommendation to stratify the wild-plum seeds is quite right. This is certainly the best way to prepare the seed for planting. Any old box can be used for the purpose. First, place a layer of sand in the bottom of the box, then a layer of plum pits or crab-apple seed, or whatever may be used, and then another layer of sand, and so on until the box is filled. Where you made the mistake was in placing the box in the cellar. It should be placed outside at once, as the frost prepares the seed for rapid germination in the spring. If the plum pits are examined in the spring, nearly all of them will be found to be cracked open, ready for sprouting, which takes place a short time after planting. They should be sown in rows, 3 or 4 inches apart in the rows. They can be transplanted at one or two years old.]

High-bush cranberry can be grown from cuttings, but they should be placed in a frame. The easiest way to grow them is from layers. They can be grown from seed, but it should be stratified the same as recommended for plums.]

The Saskatoon is grown successfully under cultivation on the Experimental Farm. The bush grows larger and bears more regularly when under cultivation than in the wild state.]

S. A. BEDFORD, Brandon.]

IS FLAX A PROFITABLE CROP.

S. B., Olive:—"We have some idea of growing flax next year, but the farmers in this district say that it is not a profitable crop to grow. I shall be greatly obliged if you will give me a few pointers on the subject."

[As long as the price for flax remains as high as it is at present, it should be a profitable crop to grow, but there are some strong objections to the crop. First and foremost, flaxseed is nearly always mixed with noxious weeds. It appears almost impossible to thoroughly clean flaxseed with the ordinary mill, and the seed offered for sale in this western country generally contains some of our most noxious weed seeds. On this farm we overcome this difficulty by sowing a small patch with such seed as we can obtain, and hand pick it in the field. This, of course, takes time and is expensive. Then, flax is difficult to harvest with the ordinary binder, and expensive to thresh, but we do not find that it exhausts the soil as much as some people imagine, for we have had very fair crops of wheat after flax on this farm. We usually sow from 40 to 80 pounds of seed per acre, depending on the character of the soil.]

S. A. BEDFORD.]

SPELTZ.

R. S., Balmoral:—"Can you give me any information regarding the newly-introduced grain called Speltz? It is highly recommended by parties in this neighborhood."

[Speltz is a variety of grain which has been grown in Europe for a great number of years, perhaps as long as the common variety of wheat. It differs from it in having the chaff adherent to the kernel, and for that reason they cannot be separated with the ordinary threshing machine, and is usually ground, chaff and all, and fed to the stock. Small samples of this was grown on the Farm many years ago, and this year in large plots for test purposes. It was sown at the same time and alongside Red Fife wheat, and gave a yield of 68 bushels, while the Red Fife gave 23 bushels per acre. It is proposed to test the feeding value of this grain during the winter.]

S. A. BEDFORD, Brandon.]

BUFF LEGHORNS WANTED.

H. L., British Columbia:—"Can you advise me as to any one keeping Buff Leghorn fowls? I see none advertised."

[Breeders of Buff Leghorns should let the public know of their existence through our advertising columns.]

Ed. F. A.]

POUNDS OF MILK FOR POUNDS OF BUTTER.

ENQUIRER, Oxford Co.:—"How many pounds of milk should it take to make a pound of butter, from milk testing 3%, 3½%, 4%, 4½%, and 5%?"

[Four pounds of fat produces five pounds of butter, less the slight loss that occurs in improper skimming and churning. Figuring from this standpoint, it requires for a pound of butter 28.57 pounds of 3 per cent. milk, 22.85 pounds of 3½ per cent., 20 pounds of 4 per cent., 17.8 pounds of 4½ per cent., and 16 pounds of milk testing 5 per cent. of fat. In practice it will require slightly more than these quantities, but this relationship should be constant.]

PROBABLY BLACK HEAD IN TURKEYS.

J. LAING, Wentworth Co., Ont.:—"We have a fine flock of about eighty Bronze turkeys. Last summer they got through the troubles of spring and summer well, but in October a sickness affected a few of them. At first they stayed at home in the morning, and hung around with drooping wings a few days, and then died. Had a diarrhea which, after lying a few hours, the under side became green. I opened and examined three of them. They were full of undigested food, and the livers were covered with small spots, some as large as ten cents, of a yellowish and green color all through, even to the center. Perhaps you can advise something to help them? I prefer an answer by letter, and enclose a stamp for it, which will greatly oblige."

[The description given is not unlike that of the very troublesome disease among turkeys known as "black head." This disease is prevalent in the State of Rhode Island, also to a limited extent in some other States. It was first noticed in Ontario last year, when one or two birds were sent in for examination. So far as I can learn, there is no cure except to stop raising turkeys and sow the soil where the droppings are placed with lime. The disease is briefly described thus:—entero hepatitis, or "black head."

"This disease is caused by a parasite. The parasite enters the digestive tract along with the food, then becomes lodged in the ceca, where it sets up an inflammatory process, which results in partial closure of these parts of the intestines. From the ceca, the parasites reach the liver, where they start a violent inflammation, which results in the formation of yellow and greenish spots. The liver is generally much enlarged."—Taken from a Washington Report, 1898. W. R. GRAHAM, Poultry Manager.]

COOKING FEED FOR PIGS.

J. B. P. R., Wentworth Co., Ont.:—"I have only a few pigs, Tamworth grades. Will it take too much time and expense to warm or cook the feed for them in winter for profit, and which is best, to feed the chopped grains or shorts dry, or to wet them immediately before feeding, so as not to let the feed freeze?"

[If the pigs are in a cold pen, it will pay to cook the feed, or to at least feed it when warm, as in this way you lessen the amount of feed required for a pound increase in weight of the animal by making them more thrifty. It is better to feed the chopped grains or shorts dry than to wet them immediately before feeding. Give the pigs a little water in a separate trough: warm water, if possible. If it is possible to keep the grain in a warm place it would pay to soak it for 24 hours before feeding, but in a pen where the temperature falls below freezing it is always better to feed dry, unless you are able to give the feed warm.]

J. H. GRISDALE, Agriculturist, Central Experimental Farm, Ottawa.]

SPAVINED FILLY.

A. F., Dufferin Co., Ont.:—"I have a colt two years old which appears to be bog spavined on both hind legs and thorough pinned on one of them. What would you advise me to do with her? They never hurt her any, and when hitched they disappear altogether in travelling five or six miles. Would you kindly let me know of a cure for scratches?"

[Apply the following blister to the mare's hocks once only, rubbing in well, and oil on third and each succeeding third day until the hair starts to grow out. Repeat in six weeks if necessary: Beniodide of mercury and iodine crystal, of each one dram; lard one ounce; well mixed. Clip hair off parts, and tie mare's head up short for six hours. Feed light this winter, and let her run in the barnyard all you can during the cold weather.]

2. Scratches are the result of grossness of the system and overfeeding on grain. To treat, feed regularly on grain in which is a liberal supply of bran. Give one of the following powders in feed twice daily: Bicarbonate of soda, powdered gentian, and powdered saltpetre, of each 1/2 ounces; arsenious acid, 40 grains; all well mixed, and divided into 12 powders. Locally apply a little of the following ointment every night to the affected parts: Oxide of zinc, 1 dram; salicylic acid, 1/2 dram; bismuth sub. nit., 1 dram; carbolic acid, 20 drops; vaseline, 2 ounces.]

SHORTHORN—DURHAM.

SUBSCRIBER, Wentworth Co., Ont.:—"Is there any difference between the Shorthorn and the Durham cattle. If there is a difference in the two, is there a Shorthorn Durham?"

[The names Shorthorn and Durham apply to one and the same breed. Originally they were known only as Durhams, the breed having originated in Durham County, England; but the name Shorthorn was later given them as distinguishing them from the Longhorn breed, which is still perpetuated to some extent in the Old Country, where prizes are yet given them as a separate breed at the Royal Show. There is a herdbook established in the United States for Polled Durham cattle, in which cattle eligible to record as Shorthorns, but which were born hornless, are admitted to registry, and also hornless cattle bred from "mulley" ancestry and having a certain number of crosses of pure Shorthorn blood. The first class rank as double standard, owing to the fact that they are eligible to the Shorthorn Herdbook as well as to the Polled Durham Record.]

GASOLINE ENGINE FOR PUMPING—DEHORNING BULL.

F. Bros., Simcoe Co., Ont.:—"1. Would you kindly tell us through your journal whether you consider a gasoline engine a desirable power for pumping water, or not? We have a windmill, but we require what water our well gives every day, and there are a great many days a windmill will not pump, and so, consequently, leaves us short of water on calm days. Our well is 130 feet deep, and we have water elevated into tanks (50 bbl.) in barn about 30 feet higher. Engine would have to force water up about 160 feet. Would gasoline engine be a good cheap power for chopping grain? How much would the gasoline cost, and where can it be purchased?"

"2. Has dehorning a bull any effect on him as a sire? I know some cases where they have been dehorned and are not as sure calf-getters."

[While we personally have had very little to do with gasoline engine power, we are convinced that it is quite satisfactory for all farm purposes, such as cutting, pulping, grinding, pumping, separating milk, etc. The engine of the present day is not unduly expensive, is safe, and easily managed. One advantage of it is that it is started about as easily as a windmill, it practically runs itself, and is always ready. Gasoline costs, wholesale, about nine cents per gallon, and is usually handled by dealers in coal oil, etc.]

2. We have heard the same opinions given as you express regarding the effect of dehorning male animals, but we have never yet received any evidence that convinces us that any bad results occur. We know of many who continue to practice dehorning such animals as you mention, who would not do so if any loss resulted from the operation.]

EXTRAORDINARY GAINS IN PIGS—DRY-EARTH CLOSET.

R. M., Lennox Co., Ont.:—"1. I raised eight pigs, farrowed on the 24th of August; shipped on Dec. 17th; age 4 months, less one week. Weight, 1,560 lbs.; average weight, 195 lbs. Is there anything unusual about that?"

"2. Do you know of any way of building and managing a dry-earth closet, in connection with a dwelling house, that will give satisfaction? An early reply to this question will oblige."

[These pigs gained an average of 1.75 pounds per day from birth until nearly four months old, whereas 1.25 pounds is large, and even 1 pound per day up till four months old is above the average with good feeding. A pen of pigs fed at the Minnesota Experiment Station, that won 1st prize at the great Chicago Fat Stock Show, in December, 1900, gained for the first 6 months about 1.17 pounds per day. It would be interesting to learn how these pigs were fed.]

2. Dry-earth closets that we have seen were arranged with a drawer or box below that could be drawn out and emptied as often as desired. A small shovelful of dry soil or ashes is thrown in the box after it has been used each time. There is, we are informed, a means of letting the dry earth down from a box by turning a crank. We will be pleased to have readers of the FARMER'S ADVOCATE describe closets of this sort that are satisfactory.]

RAISING GEESSE—MARE OUT OF CONDITION.

FARMER'S SON, Northumberland Co., Ont.:—"My father has taken the ADVOCATE for a number of years, and we could not get along without it. I am thinking of raising geese another year. I can get thoroughbred Toulouse geese at a reasonable figure."

"1st. Which would be the most profitable to buy, aged geese or goslings?"

"2nd. Is a small topknot a sign of bad breeding in a Toulouse goose?"

"3rd. How should geese be fed this winter so as to do best next summer?"

"4th. Are geese as profitable as ducks or turkeys on the farm?"

"5th. What is a good tonic to give a young driving mare whose blood is out of order and whose ankles and hind legs swell?"

[1. Generally speaking, it is better to purchase a pair of young geese, two or three years old, from which to raise the young stock. Get them unrelated if possible. Occasionally, eggs hatch well under hens and can be properly raised, but the chances of disappointment are greater than with a pair of healthy geese.]

2. A topknot on a Toulouse goose is a sign of impure breeding. The head should be rather large, short and smooth: dark gray in color.]

3. Geese are great vegetable feeders and need little more than pulped turnips during the winter season. A small daily feed of peas, corn or oats will not be lost on them. Without turnips, boiled potatoes, mashed and mixed with bran, shorts or chop, with a few oats occasionally, will answer well. A pen a few yards square will serve well for a house. It should be kept clean and dry bedded. They should have clean water to drink constantly before them, and be allowed the freedom of a yard during the day.]

4. Except for the fact that the broods of geese are usually much smaller than of ducks or turkeys, they would be much more cheaply raised, as they grow up on little more than grass, requiring only a short period of grain feeding in confinement before being killed. They require water to swim in, especially at the mating season.]

5. This question is well answered on page 665, Dec. 5th, 1900, issue of the FARMER'S ADVOCATE, under the heading "Stocking or Filling of the Legs of Horses."]

Tests with Spelt at Guelph Agricultural College.

As numerous enquiries about a cereal known as Spelt (*Triticum Spelta*) have been received within the past few weeks, a fairly full report is here given in order that a greater number may become familiar with these results.

Spelt is a cereal which is intermediate between wheat and barley, but it is usually classified as a variety of wheat. It is a native of the countries near the Mediterranean Sea. At the present day it is principally grown on the poorer soils in Switzerland, Southern Germany, and Northern Spain. It is also grown at an elevation in Switzerland where the common wheat (*Triticum sativum*) will not thrive. For general cultivation it is considered much inferior to finer varieties of wheat.

When the grain is threshed the heads break in pieces at the different joints, leaving the grain in the chaff as closely clasped as ever. To secure the clean seed, special machinery is necessary to separate the chaff from the grain. From the very nature of the region in which the spelt is principally grown, we can understand that it is mostly cultivated by the poorer classes. The flour obtained from the grain is said to produce a coarse bread.

In order to find out the value of the spelt for growing in Ontario, five varieties were imported in the year 1899. One of these was brought from Switzerland, one from Russia, and the other three were obtained in Germany. These five varieties were carefully tested in our experimental grounds, and all of them gave poor results. The best variety gave a yield per acre of fifteen bushels of grain in the chaff, and this weighed about forty pounds per measured bushel. Two of the other varieties gave an average of only about six bushels per acre, and the remaining two varieties produced no grain whatever. The average yield of straw per acre from the five varieties was only three-quarters of a ton. Some of the varieties were tested for two and three years, and were then discarded on account of the poor results obtained from them.

Some of the seedsmen on this side of the Atlantic are now booming the spelt very extensively. Extravagant claims are made for it, as will be seen from the following quotation, taken from an American seed catalogue for 1900: "1st. You thresh 50 to 80 bushels of grain, equal to corn, or barley, or oats, or rye, or peas, or wheat as food; and then comes four to six tons of straw hay, equal to timothy. It's the perfection of food for cattle; hogs yell for the food, cows jump a six-foot fence to get at the straw hay, horses fight for it, sheep delight and fatten on it, poultry relish the grain,—I tell you, Salzer's Spelt is the greatest dry food on earth. We recommend the same heartily. It yields 80 to 100 bushels of richer food than corn, and gives besides four tons of good hay per acre. We never fool the farmer."

A quantity of seed of Salzer's spelt was purchased in the spring of the present year, and two plots in the experimental grounds were sown with this variety. The results obtained this season were very similar to those obtained ten years ago. In yield of grain per acre the best plot of the spelt was surpassed by seventy-five per cent. of the varieties of spring wheat. The grain as it came from the threshing machine weighed forty-four pounds per measured bushel, and after the chaff had been removed it weighed a little less than fifty-eight pounds, being lighter in weight per measured bushel than any of the twenty-eight varieties of the common spring wheat grown at the College this year. C. A. ZAVITZ, Agricultural College, Guelph, Dec. 31, 1900.

Chatty Stock Letter from Chicago.

[BY OUR OWN CORRESPONDENT.]

Chicago's receipts of live stock (closing days of 1900, estimated) were as follows, with comparisons:

Table with 4 columns: Cattle, Hogs, Sheep, Cars. Rows for 1900, 1899, 1898.

The year's receipts show a gain of nearly 200,000 cattle, a decrease of 59,000 hogs and 126,000 sheep.

Cattle receipts were only exceeded in six other years—1889-94, inclusive.

Hog receipts were only exceeded in four other years.

Sheep receipts were equalled or exceeded in '99, '98, '97 and '96.

Cattle prices, taking good 1,200 to 1,500 lb. beeves as a basis, averaged \$5.25, or 25c. lower, with the top the highest on record—\$15.50 for a carload of the international prizewinners.

Hogs averaged \$5.00, or 95c. higher, being the highest since 1893. This, in face of an eight million run at Chicago, with liberal receipts at all Western points, is a great showing for hog-men.

Sheep averaged 35c. higher, or \$4.70, being the highest on record. Lambs made the record-breaking average of \$5.95, being 45c. higher than the previous year.

Extreme top prices, all weights native beef cattle, and average prices 1,200 to 1,500 lb. beeves:

Table with 4 columns: Extreme Top Price, Average Price. Rows for months Jan-Dec and Yearly totals.

Top prices heavy and light hogs, and average prices for all grades:

Table with 4 columns: Top Prices Heavy, Top Prices Light, Average All Grades. Rows for months Jan-Dec and Yearly totals.

Top and average prices, sheep and lambs, by months:

Table with 4 columns: Top Prices Sheep, Top Prices Lambs, Average Prices Sheep, Average Prices Lambs. Rows for months Jan-Dec and Yearly totals.



The Science and the Art of Homemaking.

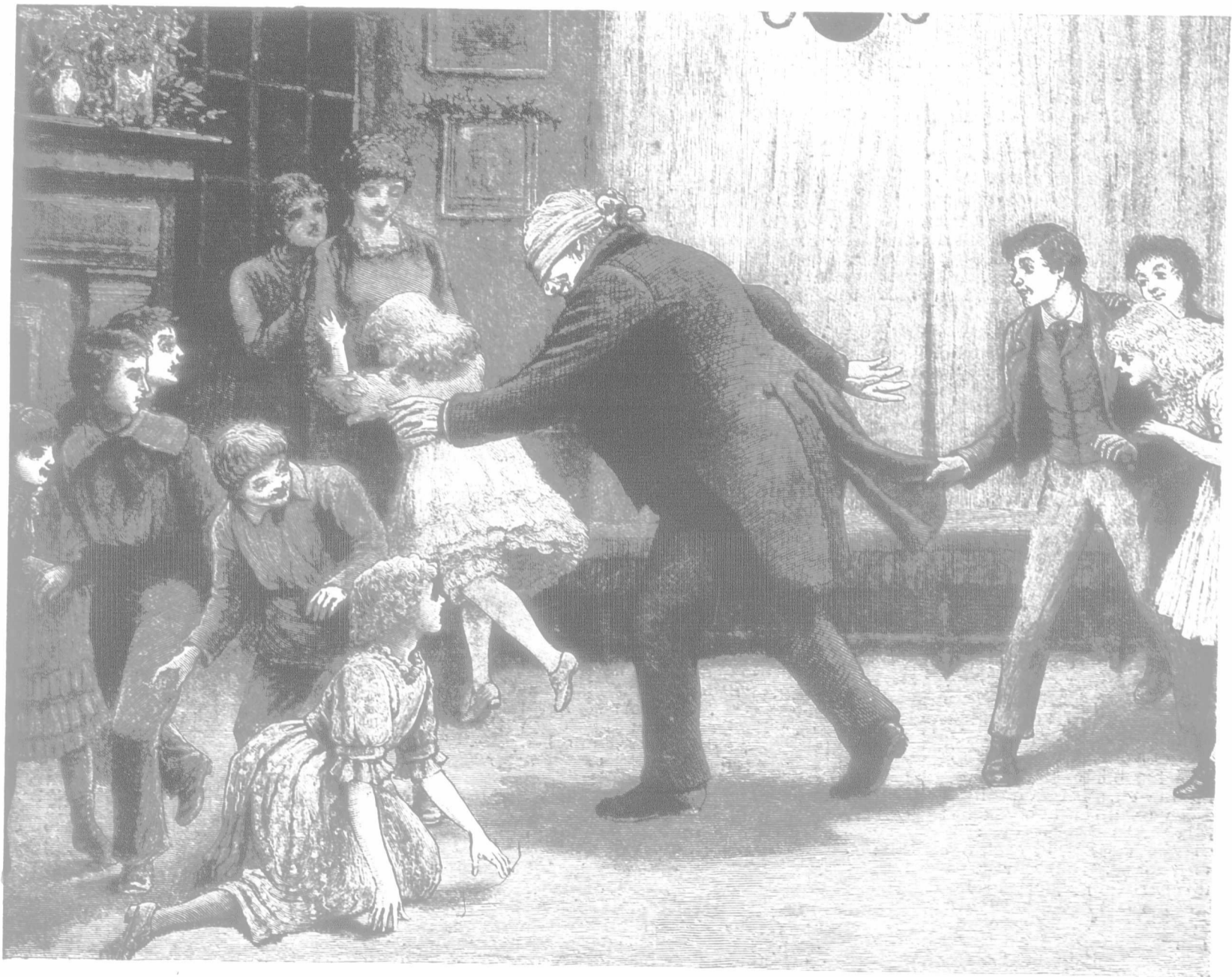
The old century has taught us many valuable lessons, but amongst them, perhaps, none more valuable than the absolute necessity for special training as a preparation for the life work of every child born into the world. Public opinion has at last decided that it is not only the man destined to become the lawyer and the doctor, the wholesale merchant or the retail tradesman, who must have definite instruction if he is to be a success instead of a failure, but that the young girl who is to become the housewife and the homemaker of her generation must have definite instruction also. There is no royal road to knowledge for one more

The girl now knows the why and wherefore of what she does. If she cooks, she does not merely take a certain number of ingredients, and after chopping some and peeling others, and stirring up the mixture, turn out a more or less palatable condiment for the table, but she knows the value of each component part, and what its effect upon the human system. She has an intelligent acquaintance with the growth and development of fruits and vegetables. She has some acquaintance with germs and how to neutralize some of their mischievous effects by cleanliness. Her sense of proportion is more exact, and she can enter upon the various processes to which she puts her hand during the day's work with an interest born of knowledge. She knows, too, that she is being trained for the life she expects to lead, which is her heritage, even though she may not be endowed with it for some time to come, or perhaps never at all. To have a home of her own may be denied to her, but knowledge is power, and the fact that she is equipped to be a housekeeper will give her a sense of self-respect and a certainty that, if need be, she can earn her own bread as the very real help in the home of another who is in a position to avail herself of her capable services.

Dr. Thwing says: "Appreciation, enlargement, enrichment, unity, and differentiation, are the

responsibilities upon her for their well-being requires special study and adaptation. The test has been applied, and the result of incorporating this definite teaching into the school curriculum has everywhere been most satisfactory. The boys who have had a chance to use their fingers as well as their brains return with renewed zest to their routine studies, whilst the girls come back refreshed from the cooking class or housewifery lesson, to their algebra or their euclid, which had begun to tangle up their mental faculties, thankful for the pleasant little break which had not only served its own high purpose, but which had cleared away some of the cobwebs which had obscured their mental vision.

The fact that this definite training will be shared in by the children of all classes alike, that it is as much a necessity for the mother-head of the opulent home as for the mother-head of the humble tenement or four-roomed cottage, for the mistress as well as for the maid, should, before this century is many years old, have such an important influence upon the vexed problem of domestic service that it will not be long before it is wholly solved. Domestic service, like that of nursing, will become a profession, and, to succeed in it, each individual must have her certificate to mark her standing, leaving only those incapable of the distinction to



"A ROMP WITH GRANDPA."

than for the other. Both boy and girl alike need guidance, and a wise discrimination in the training afforded them, if the result is to be the development of the special gifts with which they have been naturally endowed, and to this end parents and teachers should strengthen one another's hands by wise and kindly co-operation. Our limited space forbids our telling in detail what other countries have done along the lines of definite education for girls during the last fifty years, but representatives from all over the world gave, at the International Congress of Women, held in London, England, in 1899, their testimony to the encouraging fact that its necessity had, at last, been everywhere fully recognized. It was with the keenest satisfaction that the representative of the National Council of Women of the Dominion stood up, in her turn, to affirm that the Boards of Education of the Dominion of Canada were in no wise behind the educators of the continent of Europe or the Colonies of Great Britain in affording facilities for the giving to the girl-child of to-day an insight into the principles essential to the best profession for any woman, *i. e.*, that of housekeeper and homemaker. Everywhere is now accepted the fact that homemaking is a science, an art, not a mere intuition belonging to the weaker sex alone, and which should come to her as naturally as the hair grows upon her head or the nails upon her finger-tips.

words significant of the educational progress of the century. The American people began the century believing that education was of value to every man, and especially to the members of the liberal professions; they end the century convinced that no education can be too high or broad or fine for every member of the human family." And as with the United States of America, so is it, thank God, with us in Canada. We too recognize more and more clearly "that education is not a matter of paper and ink, but a taking up of the whole child, body and mind, just as it stands there, and endeavoring so to train the faculties of each as to prepare it to do the very best as it travels along the varied journey of life lying before it." It is a path full of hope, for it makes a full provision for contingencies it leaves in the training of the girl student "no gaps in her life to be filled up by the happy-go-lucky chance of something turning up."

Mrs. Hart Davis, in an admirable address upon the subject, at the International Congress of Women, said: "The old view was that by hook or by crook a woman would find a niche to fit into somewhere, whether she had received a good or an indifferent education. It was supposed she need not seek useful work to do. It would come to her of itself." But the spirit of the age has changed all this, and no one now questions that every phase of woman's life which touches the lives of others and entails

fill up the vacancies in the factories, the work of which requires a very low amount of mental capacity, and it will all be brought about by the recognition that homemaking and housekeeping is not only an art, but also a science, and, to quote the words of Mrs. Bottome, President of the King's Daughters of the U. S., "No work can be grander than the work our Father gives us to do, whether it be in the kitchen or on the broad highway."

H. A. B.

"A Romp with Grandpa."

Among the many joys that through the Christmas time, none, perhaps, is more valued by the young people than the annual visit to the old homestead where grandpa reigns an honored king and receives his guests with a right royal welcome. Every hour is delightful, but perhaps the best of all is when the spacious kitchen is cleared up for a "Romp with Grandpa."

Our illustration shows a happy group all engaged in the good old-fashioned game of "blindman's buff." One little fairy is all but in the toils of the blind man, but mischievous Hal giving a pluck at his coat-tail leaves him almost undecided which way to turn. Judging from the faces of all the group, they are indeed having a merry Christmas.

A. A.

THE QUIET HOUR.

The Death of the 19th Century.

Our life passeth swiftly onward. Each age in its turn must die. Must pass the mysterious river. And enter eternity.

Two old men were standing beside a river a river black as night and still as death. One bent beneath the weight of a hundred years; the other counted his years by thousands.

The younger man turned to him with an eager smile. "You shall see, Father Time," he exclaimed, triumphantly. He waved his hand, and the air was filled with bright and airy sprites who came about him and stood waiting for orders.

"My inventions and discoveries surpass anything which the centuries before me could show," said the 19th Century, proudly. "The lightning is harnessed to my carriages; the great sun himself is compelled to paint my pictures."

"You are very clever indeed," said Father Time. "Now you must die, and all these slaves of yours will serve their new master, and forget you. Soon, very soon, the 20th Century will laugh at your inventions, and call your machines 'antiquated' and 'out of date.'"

The 19th Century bowed his head in shame, remembering that he had spoken in that fashion of the discoveries and inventions of the ages before him.

"What evil have you done?" said Father Time. Then, through the darkness, came creeping ugly creatures, evil spirits who hated the light.

The many voices in answer nearly all seemed to give the same reason: "We do it for love of money."

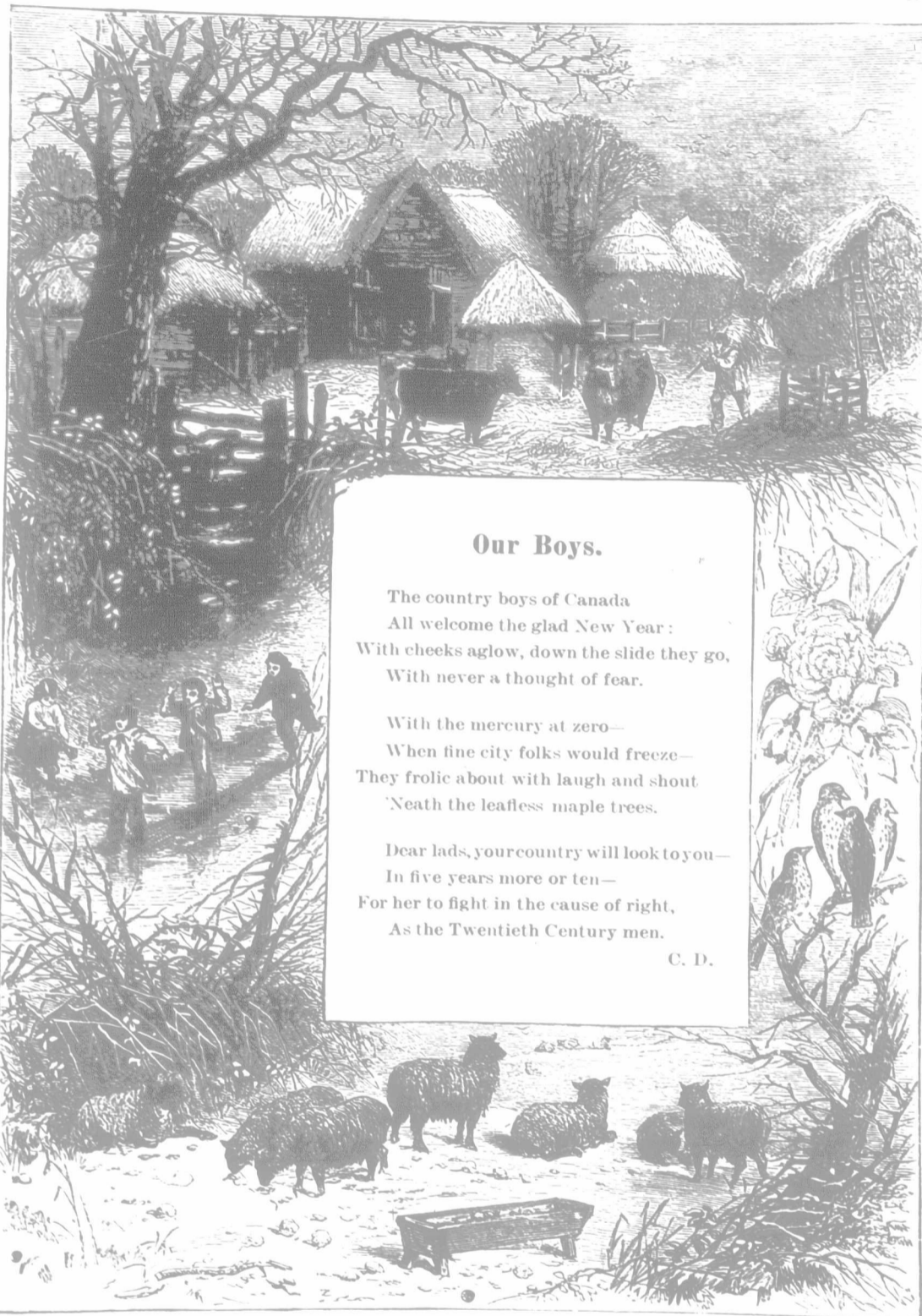
Some of the evil things crawled about like snakes on the grass; others flew about with bat-like wings. Father Time did not question any more, but said, sadly, as he dismissed them: "You have invented many new sins, and destroyed very few old ones; but it is not for me to judge you."

The 19th Century answered: "I have provided free schools for the ignorant, and compelled them to learn. I have saved many lives by my medical discoveries, and relieved pain in many ways. I have built an immense number of churches, hospitals, and other useful institutions; I have —"

Father Time smiled as he laid his hand tenderly on the bowed head of the younger man. He was really humble at last, this 19th Century. What might he not have done for the heathen if he had only put a little more heart into the work of missions!

Then came the summons to enter the dark river. He went forward bravely, while his satellites turned to do homage to a young man who just then sauntered along.

Meanwhile the spirits of love could not so easily forget their old friend. They lifted him up tenderly, and carried him through the cold, deep waters. The sound of their sweet voices came back to inspire the proud young 20th Century with a longing after better things than worldly greatness, for this was their song:



Our Boys.

The country boys of Canada All welcome the glad New Year: With cheeks aglow, down the slide they go, With never a thought of fear.

With the mercury at zero— When fine city folks would freeze— They frolic about with laugh and shout 'Neath the leafless maple trees.

Dear lads, your country will look to you— In five years more or ten— For her to fight in the cause of right, As the Twentieth Century men.

C. D.

"Thou hast not failed! Where holy love and truth Contend with evil failure cannot be! Their sorest scars claim reverence, not ruth; Their worst repulse is still a victory!"

The young king then went quietly forward to take his rightful crown, no longer proud of his own great attainments, but rather grateful to those whose successes and failures had taught him wisdom.

"Alike are life and death, When life in death survives, And the uninterrupted breath Inspires a thousand lives. Were a star quenched on high, For ages would its light, Still travelling downward from the sky, Shine on our mortal sight, So, when a great man dies, For years beyond our ken, The light he leaves behind him lies Upon the paths of men."

HOPE.

THE CHILDREN'S CORNER.

Who Filled the Stockings?

The rain was swiftly falling On a Christmas-eve long ago, When Santa Claus said to his wife, "I fear There's something the matter, I feel so queer:— Do you think you could take my place, my dear? For this rain is far worse than snow."

In bed she tucked him snugly, With a nice hot brick at his feet: Then the dear old lady bustled around, Ran-sacked the storeroom, with never a sound, And a goodly supply of treasures found, Which she neatly packed in a sheet.

The children were soundly sleeping— There were four of them, as you see,— The stockings were hung in an even row, With a name pinned tightly to every toe— "For Santa might make a mistake, you know," Said wise little Marjorie.

The midnight bells were ringing When Jimmie awoke from a doze: And widely he opened his eyes so brown, For Santa was taking the stockings down. But could this be Santa in black stuff gown? Had he dressed up in woman's clothes?

But Jimmie's eyes were heavy, And he shut them to take a nap: The next thing he knew they were shaking him And shouting, "Get up! It is Christmas, Jim! Our stockings are full to the very brim. Stop snoring, you lazy old chap!"

Some years ago this happened, But Jimmie is wondering still Why Santa Claus should choose to appear Dressed up for a joke in woman's gear, He never will guess the sad truth, I fear, That the poor old fellow was ill. C. D.

The Lookout Regiment.

I have received the following communication from one of the soldiers:

DEAR GENERAL,— Do you think you could make me captain of one of the regiments? I don't think we are going to have a rink this year, so I would have plenty of time to look after my duties. If you think you could possibly make me a captain, please tell me what I would be expected to do. Do you think it would do to divide the boys and girls up equally into regiments, give each regiment a captain, and you be general of all the regiments? Although I don't write much, I take a lot of interest in the regiment, and hope I am not asking too much altogether, because I would like to be a captain, and the only way to find out if I can is by asking, and if you allow me to be one I will try my best to do my best. Don't you think if my suggestion is any good you could choose the captains of each regiment, and let the captains you choose hold their posts for about three months. Then have an election and if the majority vote for the captain you have chosen let him hold his post for another three months. If the majority vote against him, you choose another one for each regiment.

Hoping my suggestion is not altogether worthless, I remain loyal, JEMMIE MATCHET.

I am always glad to hear from you, Jemmie, and hope you got my letter explaining that each company must consist of at least four members living in the same neighborhood. The captain of each company is expected to report progress from time to time. Our regiment is fighting

against sorrow and trouble, and each soldier should be always ready to stretch out a helping hand to a comrade—everybody within reach is a comrade. To shovel a little snow, cut a little wood, carry a pail of water, etc., for some one who needs help; to do such things willingly and cheerily either for your own family or for a neighbor, without being asked—all such kind actions are worth reporting. I would rather hear that your company is lifting small burdens for other people than that it is trying to shoulder big ones; for you can find opportunities for doing such little kindnesses every day.

I was glad to hear that all the winners in the last competition were pleased with the prizes sent to them, and hope that the winners this time will be equally well satisfied.

As this is holiday time, I will give you a few old riddles with which to amuse your friends:

"Why is it dangerous to take a nap in a train?" Because it always runs over sleepers.

"When do two and two make more than four?" When they make twenty-two.

"What weed is most like a rent in a garment?" A tare.

"When does rain become too familiar with a lady?" When it begins to pat her (patter) on the back.

"When may a chair be said to dislike you?"
When it can't bear you.
"What drum is best when it cannot be beaten?"
Conun-drum.
But I must not take up too much room with my nonsense, or the authorities will be giving me notice to quit. May you have a very happy New Year—I might say *New Century*—is the wish of your old friend,
COUSIN DOROTHY.

Ingle Nook Chats.

"Yesterday now is a part of forever.
Round up in a sheaf, which God holds tight,
With glad days and sad days and bad days which never
Shall visit us more, with their bloom and their blight,
Their fullness of sunshine or sorrowful night."
—Susan Coolidge

A serious thought is embodied in the above lines, and at no time does it appeal to us more strongly than when we have just bade farewell to a dying year and been ushered into the presence of his vigorous young successor. As it is true that "whatever has been written shall remain, nor be effaced nor written o'er again," it is equally certain that we may and should turn the experience gained in the past to genuine profit.

Do we regret lost time? Why not begin at once to use the present as you wished to have done the past? Does conscience reproach you with lack of kindness to one whom at heart you love? What fairer opportunity to heal the wound than now, when the echoes of the "good-will" song still reverberate over all the great earth, and all hearts are softened by its magic influence?

Thus, one by one, we may take the failures of the past and make of them stepping-stones by which to reach our ideal. By the way, how many of us have an ideal? It may be foolish to build castles in the air, but it affords relief during the dull routine of everyday work to allow the mind to soar to higher realms, and if we do fall short of the noble resolutions formed in that mental journey, who shall say that we have not in some degree profited by the excursion?

"Aim high, even though your point you miss!
Some higher mark you gain by this,
Than if, lest failure should befall,
You took no lofty aim at all."

The following contribution was sent me by one of our readers, who has evidently determined to look for the silver lining, a determination we should do well to emulate, for, unlike the pot of gold at the foot of the rainbow, the silver lining is sure to appear to every earnest seeker:

Ever There's Light.

Rain is falling from starless skies;
Cold winds wail and moan;
Darkness drear; but a glowworm lies
Down in the grass alone.

Tears are falling from eyes of night;
Tempests of sorrow chafe;
Loss is gloom; but ever there's light—
The love of some lonely waif.
"ESSEX."

RESULT OF COMPETITION IV.

One hundred and fourteen books were voted upon in this contest. Those winning the greatest number of votes are:

1—Uncle Tom's Cabin—H. B. Stowe	15 votes.
2—Ivanhoe—Sir Walter Scott	13 votes.
3—Ben Hur—Gen. Lew Wallace	12 votes.
4—David Copperfield—Chas. Dickens	8 votes.
5—Vanity Fair—Wm. M. Thackeray	8 votes.
6—Adam Bede—George Eliot	8 votes.
7—Robinson Crusoe—Defoe	6 votes.
8—John Halifax—Miss Mulock	6 votes.
9—St. Elmo—A. J. Evans Wilson	5 votes.
Jane Eyre—Charlotte Bronte	
Kenilworth—Sir Walter Scott	
10—To Have and to Hold—Mary Johnson	4 votes.
Beside the Bonnie Briar Bush—I. MacLaren	
Opening of a Chestnut Burr—E. P. Roe	

The total number of votes for ten books was 84, and the highest amount scored by any contributor was 80—a close run. The winners are: Miss Queenie Langford, Maple Grove, Ont.—80; D. W. Monkman, Bondhead, Ont.—77; Miss Lizzie Conner, Hyde Park, Ont.—67. Those making more than 50 of the total are: Mand Kirkland, Ada Smithson, Lily Rogers, Kate J. Matheson, M. C. Boss, Fred Conner, G. Langford, G. J. McCormac, C. W. Baker, Wilbert Mackay, J. Vessey, Agnes Henderson (extra good for a ten-year-old girl), Mrs. W. Even, Papers were also received from Laura Fee, Emily A. Murray, Franklin Hollingsworth, Matthew A. Robertson, Louise Williams, Violet Metcalfe, E. Crealy, and Beatrice B. Phin. Competitors came from Algoma, Manitoba, Assiniboia, Nova Scotia, Prince Edward Island, Quebec, and many parts of Ontario. "If at first you don't succeed, try, try again." Plenty of time for work on Contest V, to be sent in, and I hope every class will be well represented.

COMPETITION VI.

Three prizes are offered for the best articles on the subject, "My Ideal—What I should like to do with my life." Contest open until Feb. 20th, and will be divided into classes, as in contest V, viz.: Class I, 18 years and over; Class II, 14 years and under 18; Class III, under 14 years.

The glowing embers in the grate begin to grow dim, but before their cheery light has fled, a wish that all that is glad, good and true may be the lot of all her readers, is tendered by
THE HOSTESS,
Address, "The Hostess," Ingle Nook Chats, Pakenham, Ont.

A man once wrote to a distinguished scientific agriculturist, to whom he felt under obligation for introducing a new variety of swine:

"Respected sir, I went yesterday to the cattle fair; I found several pigs of your species. There was a great variety of breeds, and I was very much astonished at not seeing you there."

A Happy New Year.

Just at the turn of the midnight,
The Guardian Angel of the coming year,
When the children are fast asleep,
The tired Old Year slips out by himself,
Glad of a chance to be laid on the shelf,
And the New Year takes a peep

At the beautiful world that is waiting
For the hours that he will bring;
For the wonderful things in his peddler's pack;
Weather, all sorts, there will be no lack,
And many a marvellous thing.

Flowers, by hosts and armies,
Stars and sunshine and rain!
The merry times and the sorrowful times,
Quickstep and jingle and dirge and chimes,
And the weaving of joy and pain.

When the children wake in the morning,
Shouting their "Happy New Year,"
The year will be started well on his way,
Swinging along through his first white day,
With the path before him clear.

Twelve long months for his journey:
Fifty-two weeks of a spell;
At the end of it all he'll slip out by himself,
Glad of a chance to be laid on the shelf,
At the stroke of the midnight bell.

1901.

With eager hope, with radiant, smiling mien,
The Guardian Angel of the coming year,
Waits on the Future's verge with kindly cheer,
In robe of light untouched by hand unclean.
But ah! how changed may be that raiment's sheen
When from its folds his wishful face shall peer,
And how may we, whose sins have sullied, bear
To read His mute reproach, life's "might have been?"
Oh brothers, sisters, in fierce trial's hour,
When the arch Tempter whispers, be ye strong;
Fight, that the right may triumph o'er the wrong,
Pray for your soul's release from Satan's power,
That on the path no haunting shadow cast
May dim the tender memory of the Past.



WHO FILLED THE STOCKINGS? (SEE PAGE 23.)

"Now I Lay Me Down to Sleep."

The fire upon the hearth is low,
And there is stillness everywhere;
Like troubled spirits, here and there
The firelight shadows fluttering go;
And as the shadows round me creep,
A childish treble breaks the gloom,
And, softly, from a farther room
Comes, "Now I lay me down to sleep."
And, somehow, with that little prayer
And that sweet treble in my ears,
My thoughts go back to distant years,
And linger with a dear one there;
And, as I hear the child's amen,
My mother's faith comes back to me,
Crouched at her side I seem to be,
And mother holds my hands again.

O for an hour in that dear place!
O for the peace of that dear time!
O for that childish trust sublime!
O for a glimpse at mother's face!
Yet, as the shadows round me creep,
I do not seem to be alone—
Sweet magic of that treble tone—
And "Now I lay me down to sleep."
—Eugene Field.

Popular authors, it is said, are often the recipients of communications from persons of whom they perhaps know absolutely nothing, requesting that they may be favored with a free copy of the author's latest book. A case in point was that in which a certain novelist, not unknown to fame, received from a lady an unstamped letter asking the loan of his book, on the plea that she could not obtain it at the booksellers in her town. His reply was worded as follows:—

"Dear Madam,—In the town where you reside there appears to be a lack of all sorts of things which are easily procurable elsewhere, not only my recent work in all the book shops in which it is applied for, but also the postage stamps for letters. I have in my possession, it is true, the book you desire to obtain, and also the stamps to pay its carriage, but, to my regret, I am without the necessary string to make it into a parcel. If you can supply me with a piece I am at your service."

Good Health.

CAMPBOR FOR COLDS.

One of the most efficient remedies for breaking up a cold during its earliest stage is camphor. When the eyes begin to water, and there is the accompanying tingling of the nose and feeling of chilliness, place three drops of camphor on a lump of loaf sugar and place the sugar in mouth. Repeat this every fifteen minutes till four or five doses have been taken. At the same time place the feet where they will become thoroughly warm. This will usually prove effectual in breaking up a cold if the cold is taken at its very beginning. For a child but one drop should be placed upon the sugar, and five or six doses administered. Another method of taking the camphor, which is sometimes preferred for grown people, is to put a spoonful of sugar in a cup, add hot water and from ten to fifteen drops of camphor. This makes what is called a camphor sling. Camphor may be prepared by placing in a corked bottle as much camphor gum as the amount of alcohol which the bottle holds will dissolve. Place some of the gum in the alcohol and add more as this is taken up. This makes a strong, pure solution.

ALUM TREATMENT OF WHOOPING-COUGH.

Not many years ago alum was one of the favorite remedies for the relief of whooping-cough, but of late it has been almost entirely superseded by other less unpalatable drugs. Now it seems to be again entering upon a time of favor and appreciation. Dr. Warfvinge, of Stockholm, records a series of cases of whooping-cough of varying degrees of severity in which he exhibited the remedy, as a rule, as soon as the characteristic symptoms were declared. The earlier the treatment was begun the better were the results obtained. In one case of a boy, eight years of age, who had a cough for three weeks, and who had just begun to whoop, the symptoms disappeared entirely after the use of alum, in a solution ten grains to the ounce, for two weeks. In another case of a girl, six years of age, who had from twenty to twenty-five moderately severe attacks in the day, the cough was cured in ten days by the same means. The remedy was given usually in a mixture of equal parts of solution and orange syrup in the dose of a tea-spoonful four times a day. Even in the later stages of the disease, the attacks seemed to be greatly reduced in frequency and severity when alum was exhibited to the exclusion of all other remedies.

Humorous.

Here is a copy of a letter from the American litterateur, T. B. Aldrich, to Professor Morse, who had just favored him with an illegibly-written epistle:—

"My Dear Morse,—It was very pleasant for me to get a letter from you the other day. Perhaps I should have found it pleasanter if I had been able to decipher it. I did not, however, succeed in mastering anything beyond the date (which I knew) and the signature (which I guessed at). There is a singular and perpetual charm in a letter of yours—it never grows old, it never loses its novelty. One can say to one's self every morning: 'There's that letter of Morse's. I haven't read it yet. I think I'll take another shy at it to-day, and maybe I shall be able in the course of a few years to make out what he means by those t's that look like w's, those i's that have no eyebrows.'

"Other letters are read and thrown away and forgotten, but yours are kept forever—unread. One of them will last a reasonable man a lifetime—Admirably yours, T. B. ALDRICH."

Scene—Cottage Hospital. Patient (to nurse)—
"Would you give me a looking-glass?" Nurse—
"What for?" Patient—"To see myself starving."

A lady in the Lake District, having sent an order for a joint of mutton to the butcher, who usually supplied the wants of her household, received the following note in reply:—

"Dear Mem,—I am sorry I have not killed myself this week, but you can have a leg off my brother.—Your affectionate Butcher."

A policeman had offered his hand to a young woman, and, being refused, arrested her and took her to the police office. Officer at the bar—"What is the charge against this woman?" "Resisting an officer, sir," was the reply. She was discharged, and so was the policeman.

A barrister whose name was Missing was examining a witness about a donkey that was stolen, as follows:—Barrister (sternly)—"Do you mean to tell me the donkey strayed?" Witness (with a knowing look at the judge)—"I mean to say the ass was missing."

GOSSIP.

Messrs. A. & G. Mutch, of Craigie Mains Stud, Lumsden, Assa., write us under recent date, as follows: "Mr Geo. Mutch has returned from the west with 25 head of pure-bred and good grade Clydesdales and one team of Hackneys, comprising the following: Rosy Blythe (1130), a grand, big, useful mare with good quality; Bakkeggan Heir (2521), a well-bred young stallion that promises to make a grand horse; Victoria's Triumph, sired by Tofty 2nd (2450), out of Nell by Sir Walter, grandam by Tannahill. These Clydesdales were all bred by John A. Turner, of Millarville, Alberta, from whom the whole consignment was purchased. Among the other good things were six head of first-class geldings rising four and five years old, five good grade Clydesdale mares, and the balance colts, all of choice quality, that will make just the kind of horses required for handling the stiff clay lands in the Lumsden and Regina districts."

The year 1900 was a record one for the Fairview flock of Shropshire sheep of Mr. John Campbell, Woodville, Ont. The winnings at the fairs since Sept. 1st, 1900, total \$1,300, which indicates its standing when matched against competitors at home and abroad. While a somewhat similar amount was won in 1893, when the World's Fair winnings were \$1,000, the record of that year was excelled in 1900, as in customers' hands Fairview Shropshires were remarkable winners in Manitoba, Nova Scotia, P. E. Island, Iowa, Minnesota, Wisconsin, Indiana, Michigan, and many parts of Ontario. The demand all through the season has been steady, and while no extraordinary prices have been realized, the average was satisfactory. At the International Live Stock Exposition, Chicago, last month, orders for over \$1,000 worth were booked. On page 24, J. Campbell offers a few good ewes and Barred P. R. cockerels—good birds at medium prices.

Young Man Wanted

To learn the blacksmith and machinist business, in one of the best and most comfortable shops in the Province. Must be a good strong fellow of good habits. Apply to

J. SULLIVAN, EMERSON, MAN.

Trees! Trees! Trees!

We have a full line of Fruit and Ornamental Trees for spring, 1901, at lowest possible prices. Headquarters for packing dealers' orders. Farmers wishing to buy first-class stock absolutely first hand and without paying commission to agents, should write to us at once for a catalogue and price list. Don't wait until the last minute, as you will be disappointed. Place orders early and secure the varieties you want. Correspondence solicited.

Winona Nursery Co., WINONA, ONT.

MANSELL'S Dispersion Sale Shropshires

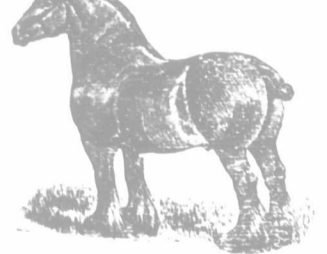
Andrew E. Mansell, Harrington Hall, Shipnal, England, who is settling in Tasmania, will sell by auction, without reserve, on Thursday, August 29th, 1901, his unrivalled flock of Shropshires. Sheep bought for America and Canada will, if desired, be sent in charge of Mr. Robert Mansell. Particulars and catalogues obtained from Alfred Mansell & Co., Auctioneers, Shrewsbury, England. Commissions carefully executed.

Shorthorns and Tamworths FOR SALE.

Our choice, dark red, 8-mos. bull. Also a few 4-mos. heifers of extra quality, with Nimrod blood.

COLWELL BROS., Newcastle, Ont.

J. B. SMITH.



J. B. SMITH offers for sale 45 Shorthorn bulls (all ages), a number sired by Lord Stanley 2nd—2220—some imported from Ontario. All this year's crop of Golden Measure (imp.) bull calves are sold. 40 Shorthorn heifers, from 6 months to 2 years old. 60 Shorthorn cows, all ages. A few young Clydesdale stallions and Clydesdale mares and fillies of all ages for sale. Everything for sale, except my stock bulls, Lord Stanley 2nd and Golden Measure (imported), and the Clydesdale stallion, Prince Charles (imported). Come and see the stock.

J. E. SMITH, SMITHFIELD AVE., BRANDON, MAN. Box 274.

IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE.

Advertisement for Mica Axle Grease. Text: "In every town and village may be had, the Mica Axle Grease that makes your horses glad." Includes illustration of a horse's head.

Advertisement for Clydesdale Horses for sale. Text: "Three young stallions, bred from the best strains in America and all first-class quality. Also 15 head of first-class grade Clydesdale geldings, from good grade mares, and sired by imported Clyde horses." Includes illustration of a horse.

Advertisement for "PRAIRIE HOME STOCK FARM." Text: "Bulls at head of herd: Judge = 23419 = and Imp. Jubilee = 28858 =." Includes illustration of a cow.

Advertisement for Yorkshire and Berkshire Swine, Clydesdale Stallions and Shropshire Sheep, Shorthorn and Ayrshire Cattle. Text: "THOS. GREENWAY, Proprietor. JAMES YULE, Manager, Crystal City."

Advertisement for Carruthers & Co., Tanners. Text: "I AM PURE GALLOWAY WHEN I GO HENCE I WANT CARRUTHERS' ACETANIN HIDE FOR A ROBE." Includes illustration of a cow.

Advertisement for Forest Home Farm Shorthorns. Text: "Cows and helpers, prizewinners at Winnipeg and Brandon Fairs, and others equally good. Yorkshire pigs—a few choice ones of both sexes. B. P. Rock Cockerels—large, strong, well-marked birds. First orders received get the choice." Includes illustration of a cow's head.

Advertisement for Andrew Graham, Pomeroy, Man. Text: "THREE BULLS Fit for service, the best I ever offered, for sale. Also some fine two-year-old and year-old heifers." Includes illustration of a cow's head.

GOSSIP.

O. A. C. STUDENTS AS JUDGES.

At the great International Live Stock Exposition, which closed at Chicago on December 8th, there was held an "intercollegiate judging contest," open to students of American and Canadian agricultural colleges. Forty-six students in all entered the contest, and the competition was of the keenest character. The students were required to judge three classes of horses, three of cattle, three of sheep, and three of swine. Prizes were given in the various classes, and sweepstakes prizes were added for the best all-round judges. The latter prizes were awarded on the aggregate scores made by those students who judged throughout all the classes. Fourteen men qualified for this part of the competition. The Ontario Agricultural College entered only one man, Mr. W. J. Black, of Shelburne, Dufferin Co., Ont. Mr. Black received practically no special training for this event, and had to depend entirely upon the ordinary training in live-stock judging such as is given to every student who takes the regular college course. Notwithstanding this fact, Mr. Black succeeded in carrying off the following prizes:

Table listing prizes: Judging Hereford cattle, second prize \$25.00; Judging Cotswold ewes, first prize 10.00; Judging swine, third prize 5.00; Judging Dorset ewe lambs, fourth prize 3.00; Sweepstakes (general proficiency), third prize 30.00; Total \$73.00.

Mr. Black won more money than any of his competitors, and, as will be noticed in the statement given above, only two men had higher aggregate scores in judging. There were eight sweepstakes, or general proficiency prizes, and six of these prizes were taken by men trained by graduates of the Ontario Agricultural College, viz., Prof. Carlyle and Dr. Hopkins, Wisconsin; Prof. Kennedy, Illinois; Prof. Craig, Iowa; and Prof. Day, of Guelph.

SALE OF HOLSTEIN-FRIESIAN CATTLE.

Messrs. Henry Stevens & Sons, Lacona, N. Y., write: "Sales of Holstein-Friesian cattle at Brookside have been very good of late. We recently sold to Mr. J. E. Doran seven fine animals, a male and six females, all exceptionally well bred and remarkably good individuals. Among the number was Manor Queen, a daughter of our great bull, Manor De Kol, whose dam, Netherland Hengerveld, still holds the world's largest official butter record of 26 1/2 lbs. in seven days. Another fine animal was Zady Bergsma 2nd, whose dam, Zady Bergsma, has an official butter record, at three years old, of 16 lbs. 3 1/2 ozs. in seven days, and is also one of our finest show cows. We exhibited her with great success as a two-year-old, from Syracuse to St. Louis, also at the Canadian Exposition, Toronto, Canada, never missing a prize, and usually winning first. Mr. Doran also secured the two-year-old heifer, Pauline Hartog De Kol, together with her beautiful heifer calf. The dam of Pauline Hartog De Kol has an official butter record of over 20 lbs. in seven days. The young calf was sired by our great Canadian-bred bull, Calamity Jane's Paul. His dam, Calamity Jane, won the Canadian Provincial dairy test four years in succession, competition open to all breeds, and in some of these tests more than thirty cows competing. Calamity Jane has been officially tested several times. At six years old she made over 24 lbs. butter in seven days, and at seven years old she made over 25 lbs. in seven days. Both tests were official. Mention should also be made of Jessie Veeman C., whose dam, Jessie Veeman, has given over 75 lbs. milk in one day, and also won the sweepstakes prize over all breeds at the Oswegatchie Agricultural Fair at Ogdensburg last year. To head the herd, was selected a fine young bull, whose sire is a son of Netherland Pieterje Princess, by a son of De Kol 2nd. The records of De Kol 2nd are too well known to the breeders and dairymen of this country to need mention by us. The entire purchase consisted of animals of the best breeding and fine individuality, very uniform in type, and of rich and large-producing strains. These animals were selected by Mr. Doran and his herdsmen, Joseph Brand, as the foundation for a herd. Their place, Brookview Farm, is situated about eight miles east of Albany, and their milk is put into 2-qt. cans and shipped daily to that city. They were very careful in making their selection, being content only with the best."

H. G. Whitney & Son also came here and selected two very fine cows, one of which was Mildred De Kol Pauline Paul. Her dam was a daughter of De Kol 2nd, referred to above, and her sire was a son of Pauline Paul. The other cow, Molly Wood 3rd's De Kol, Mr. Whitney writes us, has dropped a calf and is doing exceedingly well. He also writes that he cannot milk her in a 14-qt. pail, and he is very much pleased with his purchase.

Among our other sales was a fine yearling heifer, to E. E. Abbott. This heifer was sired by DeKol 2nd's Butter Boy 2nd, whose dam is DeKol 2nd, and whose sire is Empress Josephine 3rd's Sir Mechthilde. This was a beautiful heifer, attractive and showy in appearance, and has all indications of making a large producer. Mr. Abbott made a personal examination of the herd, and selected this heifer as one of the foundation cows for his Onondaga Co. herd.

H. V. Noyes, of the Oneida Community, and his herdsmen, visited us, and purchased a fine young bull in DeKol 2nd's Butter Boy 3rd No. 1. This we believe to be one of the finest bulls bred at Brookside for a long time. His sire, DeKol 2nd's Butter Boy 3rd, at Brookside for a long time. His sire, DeKol 2nd's Butter Boy 3rd, we believe has no superior in breeding in this country. As his name indicates, he is the son of DeKol 2nd, and sired by Manor DeKol. The dam of this young bull is Aaggie Lily's Pieterje Netherland, who has an official record of over 18 lbs. butter in seven days from three tests.

Wm. Smeck was here from Pennsylvania, and selected a very fine pair of calves—Kordyke Queen DeKol Pieterje and Inka 8th Lady Hengerveld. Jno. H. Walker also purchased a very well bred heifer, Aaggie Hengerveld DeKol, a granddaughter of our great show cow, Aaggie Grace 2nd's Pieterje, which is the only cow that we believe has ever given 100 lbs. milk in one day in an official test."

Advertisement for Kendall's Spavin Cure. Text: "The old reliable remedy for Spavins, Ringbones, Splints, Curbs and all forms of Lameness. It cures without a blemish because it does not blister." Includes illustration of a horse's leg.

MAPLE GROVE STOCK FARM.

IV yearling SHORTHORN BULLS, by a son of Indian Warrior. Also a few choice heifers. Lord Stanley 25 = 29247 = at head of herd. BARRED PLYMOUTH ROCK COCKERELS from prizewinning strains. WALTER JAMES, ROSSER, MANITOBA. 15 miles west of Winnipeg, on main line C.P.R.

Shorthorns

2 young bulls—one by Imported Knuckel Duster, one by Lord Loosie 22nd.

Yorkshires

10 choice heifers ready for service. Also some young sows. All from prizewinning stock. JAMES BRAY, Longburn, Man.

SHORTHORNS, YORKSHIRES AND TAMWORTHS.

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

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

WILD AND IMPROVED LANDS FOR SALE.

Several good farms at present for sale, or rent, in the celebrated Edmonton district. All improved. Terms reasonable. Apply for information to O. C. PEDERSON, Box 185, Strathcona, Alta.

POPLAR GROVE HEREFORDS.

Champion herd of Western Canada. Best beef cattle in the world. Sturdy young bulls for sale. Also cows and heifers. Nearly 100 head to select from. A few choice Light Brahma cockerels for sale. J. E. MAPLES, Deleau, Manitoba.

JERSEY BULLS

2 high-class Jersey Bulls for sale. Also farm lands. H. R. KEYES, 4-y-m Midway, Man.

HAZELRIGG. HOLSTEIN BULLS FOR SALE.

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GOSSIP.

THE SHORTHORN HERD OF J. & W. B. WATT.

In the records of the principal live-stock exhibitions in Canada in the last twenty years, it may be safely stated that for no other herd and no other breeder of Shorthorn cattle in the Dominion can be claimed a more successful or more honorable record in prize-winning than stands to the credit of J. & W. B. Watt, of Salem, Ontario.

Among the other families added to the herd, by the purchase of high-class females at later periods, are English Ladies, descended from imp. English Lady, bred by W. S. Marr, of Uppermill, and sired by Heir of Englishman, a bull that is said to have made as great an improvement in that herd as did Champion of England in the Sittytown herd.

But, richly-bred and well-selected as have been the females figuring in the herd, it has been to the exercise of superior judgment in the selection of sires to mate with them that the success that has crowned their work as breeders is mainly due. It was a master-stroke of good judgment when Barnpton Hero—324 was placed at the head of the herd.

Following Barnpton Hero and Challenge, a wise and judicious selection of a stock bull was made in the Marr-bred imp. Royal Sailor, a son of the Spicy Bull, Sea King, bred at Sittytown, and out of a daughter of the great William of Orange.

Among the other sires that have been used more or less in the herd may be mentioned imp. Abbot-burn, bred at Sittytown, sire of the Columbia champion Young Abbot-burn, who owes his origin to the mating of Village Blossom and Abbot-burn in this herd.

vice are Royal Victor—34681—(illustrated on another page in this issue), a sappy red-roan son of imp. Royal Sailor, and much resembling himself, out of Mildred 4th, by Hospodar, and full brother to the champion Judge, and Royal Wonder, first-prize bull under a year at Toronto and London, 1900, a red son of imp. Royal Sailor and English Lady 11th, and considered one of the best young bulls ever shown in Canada, combining quality, substance and breed character in a very high degree.

If the Messrs. Watt have used more bulls of their own breeding than most Canadian breeders, it has been because their own have been better than any they could buy, and because they knew their own were bred right, from stock as good as any that has been imported, as their showyard record has amply proven, and in this they have followed the course adopted by the most successful breeders in Britain.

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FOR SALE: Young Shorthorn bull, Double Diamond, 14 months old, sired by (imp.) Diamond Jubilee; dam (imp.) Myrtle 3rd; she won a number of prizes in Scotland at one year old, and 1st prize at Toronto at 2 years old. He is a fine, even, straight young bull. JAMES GIBB, BROOKSDALE, ONT.

Prize List Ontario Provincial Winter Fair, 1900.

- BEEF CATTLE. SHORTHORNS—Steer, two years and under three—J. Fried & Sons, Roseville. Steer, one year and under two—Israel Groff, Alma; 2 Peter Stewart, Everton. Cow or heifer, three years and over—W. J. Biggins, Clinton; 2 Dan Tallot, Everton; 3 John Campbell, Woodville. Heifer, two years and under three—J. Fried & Sons. Heifer, under two years—H. Smith, Hay; 2 J. Fried & Sons. Dressed carcass—J. Fried & Sons; 2 W. J. Biggins; 3 H. K. Fairbairn, Theodorf. Sweepstake for best Shorthorn cow or heifer—H. Smith. HEREFORDS OR POLLED ANGUS.—Steer or heifer, two years and under three—F. W. Stone Stock Co., Guelph; 2 Jas. Bowman, Guelph. Steer or heifer, one year and under two—F. W. Stone Stock Co.; 2 Jas. Bowman; 3 A. McDougall, Guelph. Steer or heifer, under one year—1 Samuel Young, Binkham; 2 F. W. Stone Stock Co.; 3 Jas. Bowman. Cow or heifer, three years and over—1 and 3 Jas. Bowman; 2 F. W. Stone Stock Co. Dressed carcass—James Bowman. GALLOWAYS OR DEVONS.—Steer or heifer, two years and under three—D. McCrae, Guelph; 2 and 3 W. J. Ridd, Eden Mills. Steer or heifer, one year and under two—1 D. McCrae; 2 T. Lloyd Jones & Sons, Burford. Cow or heifer, three years and over—1 and 2 D. McCrae. Dressed carcass—1 and 3 D. McCrae; 2 W. J. Ridd. GRADES OR CROSSES.—Steer, two years and under three—1 Jas. Leask, Greenbank; 2 J. Fried & Sons, Roseville; 3 R. J. Robinson, Ailsa Craig. Steer, one year and under two—1 Jas. Leask; 2 Andrew Richardson, Peopabun; 3 J. H. Dingle, Hamilton. Steer, under one year—1 A. Hales, Guelph; 2 Andrew Richardson; 3 Jas. Leask. Cow or heifer, three years and over—1 Jas. Bowman; 2 Wm. Arzo, Eden Mills. Heifer, two years and under three—1 and 2 Jas. Leask; 3 Jas. Scott, Aberfoyle. Heifer, under two years—1 J. Fried & Sons; 2 Jas. Leask; 3 Robt. Dawson, Guelph. SPECIAL.—Best grade steer sired by pure-bred Shorthorn bull, Jas. Leask, Greenbank. Best pair fat animals, any age or breed—Jas. Leask. Best animal, any age or breed—James Leask, 2 year old grade heifer, Flo. GRAND SWEEPSTAKE.—Best dressed carcass, any breed—J. Fried & Sons, Roseville. Shorthorn steer, 2 years 2 months old. SHEEP. COTSWOLDS.—Ewe, under one year—1 and 2 John Park & Sons, Burgessville. Wether, one

year and under two—1, 2 and 3 John Park & Sons. Wether, under one year—1, 2 and 3 John Park & Sons. Ewes, under one year—John Park & Sons. Dressed carcass, wether, one year and under two—1 and 2 John Park & Sons. Dressed carcass, ewe or wether, under one year—John Park & Sons.

LINCOLNS.—Ewe, under one year—1, 2 and 3—J. T. Gibson, Denfield. Wether, one year and under two—1 and 2 J. T. Gibson. Wether, under one year—1 and 3 J. T. Gibson; 2 L. Parkinson, Erasmus. Wethers, under one year—1 J. T. Gibson; 2 L. Parkinson; 2 and 3 L. Parkinson. Dressed carcass, wether, one year and under two—J. T. Gibson. Dressed carcass, ewe or wether, under one year—L. Parkinson; 2 J. T. Gibson.

LEICESTERS.—Ewe, under one year—1 and 3 A. & W. Whitelaw, Guelph; 2 John Kelly, Shakespeare. Wether, one year and under two—1 and 2 Orr & Lillico, Galt. Wether, under one year—1 Orr & Lillico; 2 and 3 John Kelly. Wethers, under one year—1 and 3 Orr & Lillico; 2 John Kelly. Ewes, under one year—1 A. & W. Whitelaw; 2 and 3 John Kelly. Dressed carcass, wether, one year and under two—Orr & Lillico. Dressed carcass, ewe or wether, under one year—1 Orr & Lillico; 2 John Kelly.

OXFORDS.—Ewe, under one year—1 Kenneth Finlayson, Campbellton; 2 Smith Evans, Gourock; 3 Andrew Elliott, Pond Mills. Wether, one year and under two—1 and 2 Andrew Elliott. Wether, under one year—1, 2 and 3 Smith Evans. Wethers, under one year—1 Smith Evans; 2 Andrew Elliott. Ewes, under one year—1 Kenneth Finlayson; 2 Smith Evans; 3 J. H. Hull, Mount Vernon. Dressed carcass, wether, one year and under two—1 and 2 Andrew Elliott. Dressed carcass, ewe or wether, under one year—1 and 3 Andrew Elliott; 2 Smith Evans.

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DORSET HORNS AND MERINOS.—Ewe, under one year—1 and 2 R. H. Harding, Thordale. Wether, one year and under two—1 W. E. Wright, Glanworth; 2 and 3 R. H. Harding. Wether, under one year—1, 2 and 3 R. H. Harding. Dressed carcass, ewe or wether, one year and under two—1 W. E. Wright; 2 and 3 R. H. Harding. Dressed carcass, ewe or wether, under one year—1 and 2 R. H. Harding.

HAMPSHIRE AND SUFFOLK.—Ewe, under one year—John Kelly, Shakespeare. Wether, one year and under two—1 and 3 W. J. Rudd, Eden Mills; 2 Jas. Bowman, Guelph. Dressed carcass, ewe or wether, one year and under two—1 and 3 W. J. Rudd; 2 Jas. Bowman. SWEEPSTAKES.—Best animal in class: Lincoln—J. T. Gibson, Denfield. Leicesters—A. W. Whitelaw, Guelph. Oxfords—Kenneth Finlayson, Campbellton. Shropshires—R. Gibson, Glanworth. Southdowns—W. E. Wright, Dorset. Horns—R. H. Harding, Thordale. Hampshire and Suffolks—J. Kelly, Shakespeare. GRADES AND CROSSES.—Ewe, one year and under two—John Campbell, Woodville; 2 T. C. Douglas, Galt; 3 Jas. Scott, Aberfoyle. Wether, one year and under two—1 John Campbell; 2 W. E. Wright, Glanworth; 3 T. Lloyd Jones & Sons, Burford. Three wethers, under one year—1 John Campbell; 2 R. Gibson, Delaware; 3 Orr & Lillico, Galt. Wether, under one year—1 J. T. Gibson, Denfield; 2 John Campbell; 3 W. E. Wright, Ewe, under one year—1 John Campbell; 2 R. H. Harding, Thordale; 3 J. T. Gibson, Denfield. Best ewe or wether, under two years—1 W. E. Wright; 2 John Campbell. Dressed carcass, ewe or wether, one year and under two—1 John Campbell; 2 Telfer Bros., Paris; 3 W. E. Wright. Dressed carcass, ewe or wether, under one year—1 R. H. Harding. GRAND SWEEPSTAKE.—Best sheep carcass, any breed—John Campbell, Woodville, grade Shropshire. SWINE.

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No. 15. Is a small-sized Swiss O. F. Gun Metal Chatelaine Watch.

No. 16. Is the same, only with Sterling Silver case, which can be had nicely engraved.

Nos. 17 and 18 are a good-quality American Watch, O. F. stem wind, and push-in stem and turn to set hands. These are a little larger than the usual Ladies' Watches, and are smaller than the usual Boys' Watches, though can be used for either Boys, Girls or Young Ladies.

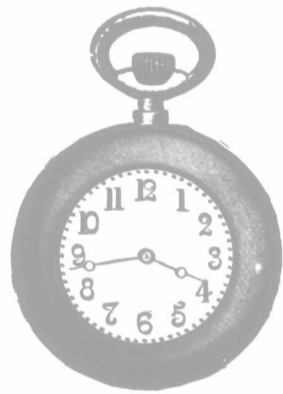
Nos. 19, 20 and 21 are small sized; in fact, are the exact size of cut. These are American Watches, O. F. stem wind, and push-in stem and turn to set hands, and are first-class timekeepers. Will give perfect satisfaction.

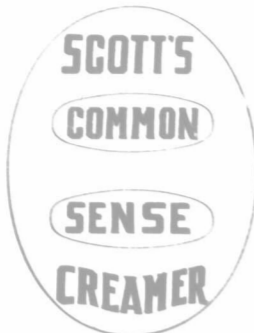
If a nice leather wrist case is desired with these watches, send two extra subscribers.

Nos. 22, 23, 24 and 25 are similar to the accompanying cut. These are regular Ladies' Hunting Watches. Nos. 22 and 24 are fitted in 20-year guaranteed Gold Filled cases, nicely ornamented, or to be had in plain or plain engine turned, and the same applies to Nos. 23 and 25, excepting that they are fitted in 25-year guaranteed Gold Filled cases, and 14K Gold Filled; 22 and 23 are fitted with 7-Jeweled Nickel, first-quality Elgin movements. Nos. 24 and 25 are fitted with 15-Jeweled Nickel, first-quality Elgin movements.

When making your choice of Watch as premium, be sure to mention its number as given in premium list, also whether Lady's or Gent's.

THE WILLIAM WELD CO., LTD., WINNIPEG, MAN.





ECONOMY OF PRODUCTION is the best motto for 1901. If you have 10 or 12 cows and are financially in a position to buy a Cream Separator, without becoming a slave to these who own your means of production, you should have one. Drop me a p. c., and get full particulars of a Cream Separator in which you will get full value for your money in good material, workmanship and perfect separation.

Otherwise you should get one of those Creamers, made to suit the times, and better than a Cream Separator for the farmer of limited means with a small herd of cows.

Consignments of butter handled to shipper's advantage. Address:

WM. SCOTT,
206 Pacific Avenue. **WINNIPEG.**



Jan. 1, 1901.

THE opening of the **NEW CENTURY** marks the opening of our own **DIRECT OFFICES, STORES and SHOPS,** and a new era in the **CREAM SEPARATOR INDUSTRY IN WESTERN CANADA.**

THE
De Laval Separator Co.

CANADIAN OFFICES:
236 King St., Winnipeg, Manitoba.

GENERAL OFFICES: WESTERN OFFICES:
74 Cortlandt St., New York. Randolph & Canal Sts., Chicago.



Holsteins, Shropshires, Improved Large Yorkshires, and Jersey Red Hogs.

Four Holstein show bulls, one 12 months, one 2 years, and two 7 months old. Owing to my being short of feed, will sell at a bargain.

JOHN OUGHTON, MIDDLEBURY, MANITOBA. Satisfaction guaranteed.

MUST SELL, for lack of room, nine thoroughbred Holstein-Friesian bull calves of rich breeding, two to twelve months old, some from high-testing dams in Advanced Registry. Bargain prices. Also a few fine females. Also Shropshire ram lambs, and Large Improved Yorkshire pigs.

SOUTH SIDE FARM, St. Paul, Minn.

For
Galloways

APPLY TO
T. M. CAMPBELL,
Hope Farm, St. Jean Baptiste, Manitoba.

SHORTHORNS & COTSWOLDS.
The proper kind bred and kept on our farm. Good stock for sale at easy prices. Rams for sale, and fine yearling bull still here. Also bull calves.
D. HYSOP & SON, Box 492, Killarney, Man.

Thorndale Shorthorns.

24 BULLS, under one year, and about 100 FEMALES, of all ages, to choose from.

JOHN S. ROBSON, Manitou, Man.

PLEASE MENTION FARMER'S ADVOCATE.

Roxey Stock Farm,
BRANDON, MAN.

J. A. S. MACMILLAN,

IMPORTER AND BREEDER OF PURE-BRED

Clydesdales, Shires, Hackneys.

STALLIONS AND MARES.



INSPECTION INVITED.

CORRESPONDENCE SOLICITED. TERMS EASY. **Prices Right.**

FULL PARTICULARS ON APPLICATION.

APPLY **P. O. BOX 403.**

LAKE VIEW RANCH

Herefords and Galloways

Young bulls for sale. For prices write

J. P. D. Van Veen, FILE HILLS P.O., N.-W. T.

Unparalleled Subscription Offer

TO WEEKLY FREE PRESS

Subscribers

"The Paper of the West for the People of the West."

COMMENCING November 1st, 1900, arrangements have been made to present, every two weeks, to every subscriber to the Weekly Free Press, Winnipeg, a fine reproduction printed on art paper, suitable for framing. The pictures will be specially-made half-tones of the highest quality, well worthy of preservation, and calculated to adorn the home. They will include late portraits, specially taken for this series, of the leading men in the public life of Canada, beginning with Sir Wilfrid Laurier and Sir Charles Tupper.

With these portraits, which will constitute a valuable gallery of the most eminent Canadians of the times, there will be interspersed half-tone reproductions from Art Works, showing Manitoban and Western views, pictures depicting typical scenes in Canadian life, military pictures and general views, the whole forming a most desirable collection of the highest interest and value.

Whether used for framing or kept as a portfolio of 30 attractive Art Works—for that will be the number received in the course of about a year—these pictures will be well worth having. The presentation every fortnight, of these pictures, will be but one respect in which the Free Press will commend itself during the coming year as better than ever before.

With new presses, new machinery, new type and improved facilities, it will continue to strive to deserve the reputation it has earned, of being "the paper of the West for the people of the West."

By ordering at once, new subscribers will obtain the Weekly Free Press to 1st January, 1902, and all the pictures, for \$1.00 only.

LEICESTERS!

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

MAPLE GROVE FARM.
High-class Shropshires, Rams and Ewe Lambs for Sale.

My sheep are stock bred by John Campbell and Hammer & Sons, the noted Ontario breeders. Won all first prizes with my Shrops at Winnipeg this year.
D. E. CORBETT, SWAN LAKE, MAN.

Hensall Farm Berkshires



Good Pigs of all ages FOR SALE by **Elder Bros.,** Hensall Farm, Virden, Man.

A BARGAIN

The fine Improved Large Yorkshire boar No. 2191, bred by A. Graham. First-prize boar at Brandon and Wawanesa Fairs. Price, \$19. Address:

KING BROS., Wawanesa, Man.

BLACK MINORCAS.

Young stock for sale—some beauties. Satisfaction guaranteed.

Box 22. **A. M. ROBERTSON, CALEDONIA, ONT.**

Norwood Bridge Poultry Yards.
Houdans, White Plymouth Rocks, White Wyandottes, Bronze Turkeys, and Pekin Ducks.

Stock from my prizewinning birds for sale. First-class stock. Fair dealing. Reasonable prices.
JOSEPH WILDING Proprietor, Norwood Bridge. Winnipeg, Man.



Owned by **H.A. Chadwick,** St. James, Man.

As I have decided to go into the breeding of Plymouth Rocks exclusively, I will sell at reasonable prices my entire stock of prizewinning Brahmas, Langshans, Partridge Cochins and Bantams. My birds are too well known as prizewinners to require any further reference.
Fox Terriers and pedigreed Collie pups for sale.

H. A. CHADWICK, St. James, Man.

Will exchange my birds above mentioned for first-class Plymouth Rocks, but only for high-class birds, as the birds I offer are all good ones.

FORT ROUGE POULTRY YARDS

FOR SALE Golden Wyandottes, Indian Games, Langshans, Pekin ducks, Belgian hares. Seven varieties of pigeons. Also, White Wyandottes, Barred Rocks. Two breeding pens of Black Minorcas for sale, very cheap. FOR PRICE AND PARTICULARS WRITE—

S. LING & CO., WINNIPEG, MAN.

Sable Collies PURE-BRED, FROM PRIZEWINNING TOCK.

Fox terrier, from English and American winners. B. P. Rock and Silver Wyandotte cockerels.
Prices moderate.

HANLAN, MAN. **W. J. LUMSDEN.**

SHEEP BREEDERS' ASSOCIATIONS

American Shropshire Registry Association, the largest live stock organization in the world. Hon. John Dryden, President, Toronto, Canada. Address correspondence to MORTIMER LEVERING, Secretary, Lafayette, Indiana.

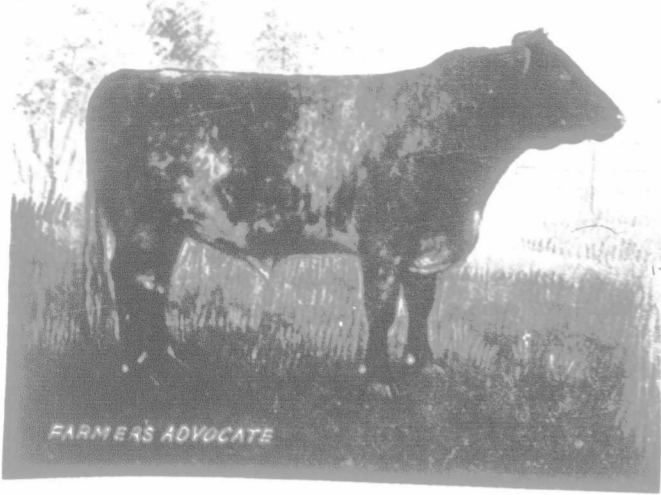
SEEDS SEEDS

You won't be disappointed if you place your orders for this season with **J. M. PERKINS,** the Seedsman of Winnipeg, as he carries the greatest stock of Flower, Garden and Field Seeds west of Toronto. Send for our illustrated catalogue. Free, for the asking.

J. M. PERKINS, MARKET SQUARE, WINNIPEG.

PLEASE MENTION FARMER'S ADVOCATE.

SHORTHORNS



IMP. FASHION'S FAVORITE.

140 HEAD

SCOTCH IMPORTED

140 HEAD

NINETY of the females are either in calf or have calves at foot. The majority of the calves are imported in dam.

Some of the families represented in the herd are as follows:

AUGUSTAS
CLARAS
NECTARS
GOLDIES
JENNY LIND
VICTORIAS
MATILDAS

BESSIES
CROCUS
ROSEBUDS
BRAWITH BUD
LANCASTERS
MAYFLOWERS
AMARANTHS

BUTTERFLY
CLIPPERS
EMMAS
BROADHOOKS
MEDORAS
MINAS
VILLAGE MAIDS

BEAUTY
MISS RAMSDEN
FLORAS
FAGLANS
LUSTRES
GEM OF THE VALE

FIVE EXTRA GOOD IMPORTED BULLS and A NUMBER OF VERY promising BULL CALVES, imported in dam, FOR SALE

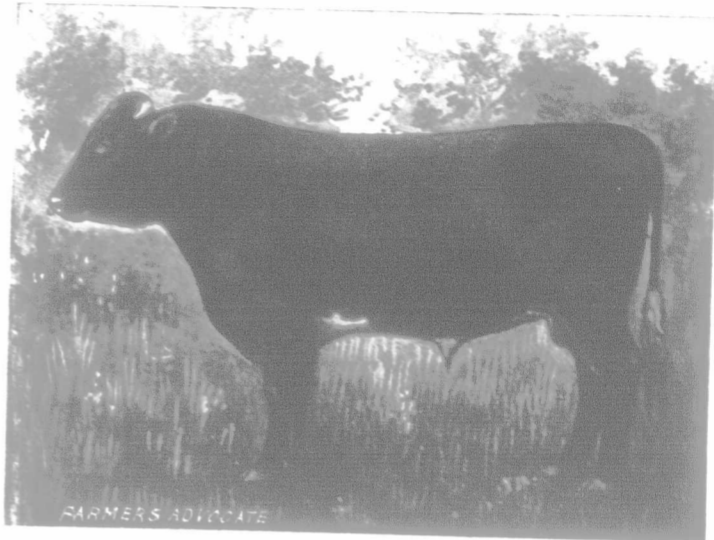
HERD headed by the IMPORTED BULLS, Golden Drop Victor and Prince Bosquet.



IMP. CLAN McKAY.

CATALOGUE FREE.

If interested, come and see us, or write—



IMP. PALERMO.

H. CARGILL & SON,

CARGILL, ONTARIO, CANADA.



W.A. Doherty & Co.

ORGAN MANUFACTURERS.

Clinton, Ontario, Canada.

The Largest Reed Organ Factories in Canada.

Established 1875.

Send for Catalogue.



DOHERTY

PLEASE MENTION THE ADVOCATE.

D. FRASER & SONS,

EMERSON, MAN..

Breeders and importers of Durham Cattle, Shropshire and Southdown Sheep, and Pure-bred Poland-China Pigs a specialty. Young stock for sale. 9-5-m

DR. BARNARDO'S HOME.

The managers of these institutions invite applications from farmers and others for boys and youths, who are being sent out periodically, after careful training in English homes. The older boys remain for a period of one year at the Farm Home at Russell, during which time they receive practical instruction in general farm work before being placed in situations. Boys from eleven to thirteen are placed from the distributing home in Winnipeg. Applications for younger boys should be addressed to the Resident Superintendent, 115 Pacific Avenue, Winnipeg, or P. O. Box 970; and for older boys, possessing experience in farm work, to Manager, Dr. Barnardo's Farm Home, Barnario, Man.

CONTAGIOUS ABORTION

can positively be cured or prevented by the use of

West's Fluid

which is a tar product, and is also a cheap, effective and non-poisonous disinfectant and insecticide.

Circular (specially prepared by a V.S.) on application.

Mfrs.—The West Chemical Co. Toronto.

AGENT FOR MANITOBA—

W. R. ROWAN, Box 603. WINNIPEG, MAN.

IT'S A WINNER.

So is our

Ideal Flax note-paper and envelopes

120 sheets of paper with 100 envelopes, mailed for 60 cts.

This is only one of the many snags we offer. We carry a full stock of office, school, municipal supplies. Write us for catalogue. Our store is "value."



The FORD STATIONERY CO.,

One door north of P. O.

Manitoba Dairy School

THE SIXTH SESSION

WILL OPEN ON

JANUARY 7th, 1901.

A FULL COURSE OF INSTRUCTION IN

Home Dairying, Butter and Cheese Making, and all work pertaining to the Dairy Industry.

For information and application blanks, address

C. A. MURRAY,

Dairy Superintendent,

WINNIPEG, - MANITOBA.



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.

178 Michigan St., CHICAGO, ILL.

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

A Good Improved Half-Section. G. P. Collyer, London, Ont., offers for sale in this issue and fully describes a farm of 320 acres. Mr. Collyer has his chief business interests in Ontario, and will sell his Manitoba farm at a bargain. See the advertisement for location, improvements, etc., and write Mr. Collyer for full terms, etc.

The De Laval Separator Company have taken over from the Canadian Dairy Supply Company the agency of the De Laval Cream Separators for Manitoba and the Northwest Territories. Mr. Lindback, who has been managing the affairs of the Canadian Dairy Supply Company in the West for the past twelve months, becomes manager, and under his able management it is certain that the interests of the De Laval Cream Separators will be well looked after, and their business pushed throughout this country, from Lake Superior to the Rocky Mountains.

The Miniota Farmers' Mutual Fire Insurance Co.—The annual meeting of the above company was held on Dec. 14th. The report of the Secretary, W. A. Doyle, of Beulah, showed that 740 policies were issued during the year and that the total amount at risk was \$2,282,686.00, an increase for the year of \$291,840. The cash reserve has also been increased from \$20,664.60 to \$22,981.20, which with the due bills and assessments in course of collection and the premium notes make the total assets \$49,677.55, an increase of over \$5,000.00 over last year. It is hoped to reduce the assessments on premium notes from 20 to 15. The Board of Directors for 1901 are: J. W. Sparling, President, Beulah; Jas. A. Frazer, Vice-President, Beulah; W. A. Doyle, Beulah; R. F. Patterson, Birtle; F. J. Collyer, Welwyn; J. T. Lynch, Arrow River; Wm. McDonald, Virden; W. M. Taylor, Beulah; D. D. Frazer, Oak River; G. Rowan, Miniota; J. C. Dudley, Birtle; Thos. Lapp, Virden.

CANADIAN PACIFIC RY. EXCURSIONS

—TO—
Ontario, Quebec,
the
Maritime Provinces
and the
Old Country.

\$40
Montreal and Toronto
and points west thereof.

Tickets on sale December 3rd to 31st. Good for Three Months.

Tourist Cars to Halifax, St. John, Montreal, Ottawa, Toronto.

For particulars apply at City Office (opp. Post Office) or Depot.

WM. STITT, Gen. Asst. Pass. Agt.
C. E. MCPHERSON, Gen. Pass. Agt.
Winnipeg.

320-ACRE FARM FOR SALE.
South half Sec. 6, Tp. 16, R. 29, w.

260 acres thoroughly fenced and subdivided with three wires; 150 acres under cultivation; 36 acres summer-fallowed the past season, and 15 acres of fall plowing, ready for wheat in the spring. The farm has been worked on the 3-year rotation system, summer-fallowing one third every year, and land in first-class state of cultivation, yielding from 40 to 45 bushels wheat per acre. There is quite a large portion in virgin prairie, with bluff of good young poplar on it. Frame house, lathed and plastered twice, making two dead-air spaces, and well-finished in every respect. Main part, 20 x 30 ft., downstairs; dining-room, kitchen, pantry, and hall upstairs; 4 bedrooms and linen cupboard upstairs; and a lean-to on north side, 10 x 30 ft. There is a good stone cellar, with brick partition, under house. House cost \$1,200, not counting labor of drawing sand, stone, etc., and finishing. Stable, 26 x 40 ft., concrete; hayloft above, and frame implement shed, 15 x 40 ft., on north side. Henhouse, frame; pigpen, frame. Pigeon-fence yard, Granary, 22 x 31 ft. All shingle-roof buildings: one frame stable, 22 x 15 ft., with sod roof. There is also a never-failing well. Seed and feed can be bought by purchaser at market prices. Situation: 17 miles from Mousoun; 3 miles from church and school. The N. W. C. R. R., whose present terminus is 25 miles east, is expected, during the coming summer, to run within 3 miles of the farm.

This is undoubtedly one of the best opportunities of obtaining a grand homestead at a moderate price.

For further particulars apply to
G. P. COLLYER,
London, Ont.

For Sale: Six Ayrshire cows, ranging from 3 months to 1 year past. Also a few ewes and lambs, thoroughbred hogs, and Scotch collie dogs.

WM. STEWART & SON, MENIE, ONT.

The Army of Health.

THE ARMY IN THE PHILIPPINES INSIGNIFICANT COMPARED WITH THIS ONE.

If all the people in the United States, Canada and Great Britain who make daily use of Stuart's Dyspepsia Tablets could be assembled together it would make an army that would outnumber our army of one hundred thousand by at least five to one.

Men and women who are broken down in health are only a part of the thousands who use this popular preparation; the greater number are people who are in fair health, but who know that the way to keep well is to keep the digestion perfect and use Stuart's Tablets as regularly as meal time comes to insure good digestion and proper assimilation of food. Prevention is always better than cure, and disease can find no foothold if the digestion is kept in good working order by the daily use of Stuart's Dyspepsia Tablets.

Mr. Thomas Seale, Mayfield, Calif., says: "I have used and recommended Stuart's Tablets because there is nothing like them to keep the stomach right."

Miss Lelia Dively, 4627 Plummer St., Pittsburg, Pa., writes: "I wish everyone to know how grateful I am for Stuart's Dyspepsia Tablets. I suffered for a long time and did not know what ailed me. I lost flesh right along until one day I noticed an advertisement of these tablets and immediately bought a 50-cent box at the drug store. I am only on the second box and am gaining in flesh and color. I have at last found something that has reached my ailment."

From Mrs. Del. Eldred, Sun Prairie, Wis.: "I was taken dizzy very suddenly during the hot weather of the past summer. After ten days of constant dizziness I went to our local physician, who said my liver was torpid and I had overheated my blood; he doctored me for two weeks without much improvement. I finally thought of Stuart's Dyspepsia Tablets (which I had used long before for various bad feelings), and the first three tablets helped me. They are easily the best all-round family medicine I ever used."

The army of people who take Stuart's Tablets are mostly people in good health, and who keep well by taking them regularly after meals. They contain no opiates, cocaine or any cathartic or injurious drugs, simply the natural peptones and digestives which every weak stomach lacks.

Stuart's Dyspepsia Tablets are sold by druggists everywhere in United States, Canada and Great Britain—Advt.

Northern Pacific Ry.

WILL, DEC. 3RD TO 31ST, SELL

Round Trip Excursion Tickets to
MONTREAL

AND ALL POINTS WEST THEREOF AT A RATE OF

\$40

To points East of Montreal, in Quebec and the Maritime Provinces, at correspondingly low rates.

Excursion Rates to

California, Mexico and all Southern Winter Resorts

The finest train out of the city—plush upholstered, high-back seats, wide vestibule cars.
For information re rates, time, etc., apply at Depot Office, Water Street.

Condensed Time Table from Winnipeg.

MAIN LINE.

Morris, Emerson, St. Paul, Chicago, Toronto, Montreal, Spokane, Tacoma, Victoria, San Francisco
Lv. Daily..... 1:45 p.m.
Ar. Daily..... 1:30 p.m.

PORTAGE BRANCH.

Portage la Prairie and intermediate points.
Lv. Daily, ex. Sunday..... 4:30 p.m.
Ar. Mon., Wed., Fri..... 10:35 a.m.
Ar. Tues., Thur., Sat..... 11:59 a.m.

MORRIS-BRANDON BRANCH.

Morris, Roland, Miami, Baldur, Belmont, Wawanesa, Brandon. Also Souris River Branch, Belmont to Elgin.
Lv. Mon., Wed. & Fri..... 10:45 a.m.
Ar. Tues., Thurs. & Sat..... 4:30 p.m.

H. SWINFORD, Gen. Agent, Winnipeg.
J. T. MCKENNEY, City Passenger Agent, Winnipeg.
CHAS. S. FEE, G. P. & T. A., St. Paul.

GOSSIP.

Messrs. Alfred Mansell & Co., of Shrewsbury, have received a letter from Mr. George Simonds, of Tasmania, which reads as follows:—"My Shropshire shearing ram, bred by Messrs. Evans, to be known henceforth as 'Austral Star,' arrived by the ss. Paparua on the evening of Oct. 29th, in good order, and it will interest you to know that I am perfectly satisfied with the selection. The other sheep sent with the same vessel turned up in a most healthy condition, reflecting creditably on the arrangements made for the journey."

PLEASE MENTION FARMER'S ADVOCATE.

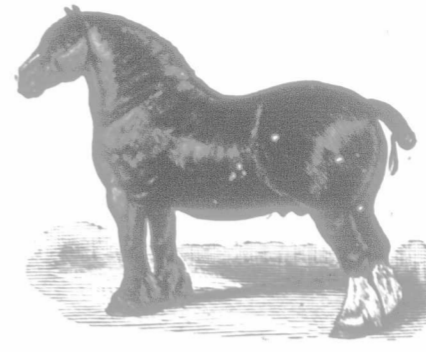
CLYDESDALE STALLIONS FOR SALE.

Third consignment will arrive about January 1st, 1901.

A High-class Lot, of Good Size and Quality, and of Most Fashionable Breeding.

Parties desirous of securing high-class horses will do well to see these or write us before purchasing.

Dalgety Bros., 463 King St., LONDON, ONT.



"Post" Fountain Pen.

SOMETHING THAT EVERY MAN, WOMAN, BOY AND GIRL NEEDS.

It is a wonderful tribute

to the greatest invention in fountain-pen construction of the age.

THE PRICE OF THE POST IS \$3.00. IT CANNOT BE PURCHASED UNDER THIS PRICE ANYWHERE.

The patentee has a hard-and-fast agreement with the trade and agents that \$3 shall be the lowest retail price. By a special agreement we are in a position to make

A Great Offer: We will send one of these pens to anyone who sends us three new subscribers, accompanied by \$3.00 in cash.



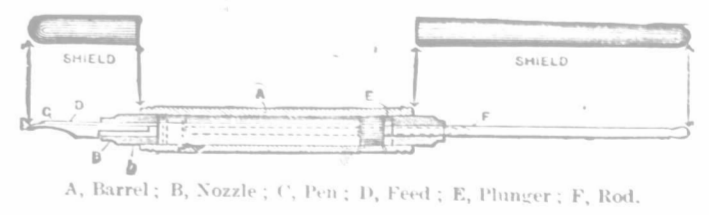
General Lew Wallace, the author of the greatest book of the age, "Ben Hur," also "Prince of India," "Commodus," etc., says in a letter in his own handwriting: "The fountain pen, Post, was received, and I have taken the liberty of trying it thoroughly. Please accept the excuse for failure to acknowledge sooner. I have tried every pen of the kind on the market, and now unhesitatingly give the preference to the Post. It not only feeds itself with less care, but has the immeasurable advantage of re-supply without inking the fingers. I do all my work with it."

Lew Wallace

To show our confidence in this pen, we will send you one on trial for a week upon receipt of \$1.00, which, if not entirely satisfactory, you can return to us and we will refund you the \$1.00 paid us. If satisfactory, you must send us the names and addresses of the three new subscribers and \$2.00 additional cash.



THE only self-filling and self-cleaning pen, manufactured in the world. To fill the pen, put the nib in ink and draw the piston rod up. To clean, put the nib in water and draw the piston rod backwards and forwards a few times.



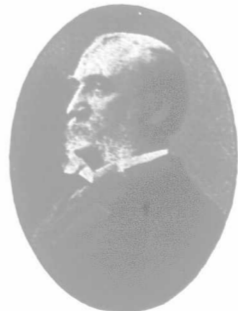
A, Barrel; B, Nozzle; C, Pen; D, Feed; E, Plunger; F, Rod.

The world's greatest singing evangelist, who has thrilled thousands and tens of thousands, now raises his voice in praise of the Post Fountain Pen.

Mr. Sankey sends the following characteristic letter: "I have used the Post pen for some time, and have had great satisfaction with its use. It never fails or gets cranky. One can at least have clean hands by using the Post, whatever the heart may be."

Irab. Sankey

ADDRESS—



THE **Wm. Weld Co., LTD.,** WINNIPEG, MAN.

GOSSIP.

J. E. Marples, Poplar Grove Farm, Delton, writes us, under recent date, to the effect that he has sold his grand Hereford stock bull, Spotless of Ingleside, to John Wilcox & Brother, Lamerton, Alta.

At the Oak River Summer Fair there was a very spirited contest among the agricultural teams, and the judges were unable to agree at the time regarding the respective merits of the teams, and withheld decision in connection with themselves as to some points in connection with the horses. Now, after 1 month's deliberation, the awards have been announced as follows: 1 J. R. Thompson, Hamiota; 2 John Bastard, Bradwardine; 3 J. R. Rankin, Hamiota.

E. P. Welbow, who won first place for Wisconsin in the intercollegiate stock judging competition at the great Fat Stock Show in Chicago, was a first-year student in the short course of the Wisconsin Agricultural College, and received most of the training from Mr. A. G. Hopkins, veterinarian and teacher in animal husbandry, a Canadian and well known to many in Manitoba, where he practiced veterinary for several years.

J. G. Washington, Niga, writing under recent date, says that his bull, Sittlyton Hero 7th, that won first in his class and sweepstakes as best bull, any age, at the Winnipeg Industrial last July, shown by the Hon. Thomas Greenway, is growing well and retaining all his quality and smoothness. Mr. Washington states that so far his stock have wintered in fine shape, but that with him feed is scarce and of poor quality. Among recent sales he reports the following: The stock bull, Indian Warrior 2nd, to Stewart Foster, Killarney; the bull calf, Royal Master, and a two-year-old heifer, to the Hon. T. Greenway, Crystal City.

W. T. Lytle, Beaconfield, Man., breeder of Lincoln sheep, three of whose prizewinners at the Winnipeg Industrial were illustrated in our issue of December 5th, writes regarding these sheep: "The shearing ewe was imported from England, selected from Wright's flock by I. H. & E. Patrick, Iderton. She was one of four lambs that took first and second prizes at Toronto and London Exhibitions in 1899. The aged ram, H. A., was bred by Gibson & Walker, Iderton, Ont., sired by Paddy. He has been a great show ram and only defeated once in his long career and then when temporarily out of condition, having defeated same ram the previous year. The shearing ram, King Riby, was bred in the famous flock of H. Dudding, Stallingboro, England. He was second prize at the Royal as a lamb in '99, and first prize at the Winnipeg Industrial in 1900, and at four local shows.

D. Fraser & Sons, of Lake Louise Stock Farm, Emerson, sold recently to the Fire Department of the City of Winnipeg three finely bred young horses, the get of the old Thoroughbred stallion, Disturbance. One of these, a beautiful sorrel gelding, John, standing 13.3 hands, and weighing about 1,100 lbs., was purchased as a driver for the Chief of the Brigade. The Chief's driver, be it understood, is not simply for driving his family out of an afternoon, but to convey the Chief to the scene of a fire with the quickest possible dispatch, and the rate of going along the stone-paved streets is frequently tremendous, and the point guarantee that his quality is of the highest. The other two were a matched team, purchased for one of the new light weight hose wagons, and they are a magnificent pair of colts. Old Disturbance left some grand good colts, and the pity is there are not more of his kind in the stud service in this Province. The Messrs. Fraser also report sales of several Shorthorn bulls at satisfactory prices.

Pure Scotch Shorthorns for Sale. Two bulls and fifteen months old, and three two-year-old and two one-year-old heifers. All right. Good ones. Meadowvale station, C. P. R. S. J. PEARSON & SON, Meadowvale.

NEW IMPORTATION

Just arrived. Personally selected from the best studs in England and Scotland.

CLYDESDALES

By the champion winners, Baron's Pride, McGregor, Flashwood, Prince Alexander, Prince of Carruchan, etc.

Shires, Suffolks, Percherons and Hackneys

By the leading sires of the day, all combining size, color, quality and action.

Fourteen first prizes and six second prizes won at the recent State Fairs of Illinois, Iowa, and Wisconsin, in the very hottest competition. Inspection cordially invited.

ALEX. GALBRAITH, Janesville, Wis.

WANTED—A situation as herdsman or stockman (used to dairy or breeding herds), by experienced Englishman.

R. GOODALL, EGLINTON P. O.

SPRINGHURST SHORTHORNS.

The herd is largely of Cruickshank and other Scotch sorts, and is headed by the Inverphomery-bred bull, Knuckle Duster (imported) (72733). Herd has furnished the Fat Stock Show champion three times in the last five years.

Choice young stock (both sexes) FOR SALE.

H. SMITH, - HAY, ONT. Exeter Station on G. T. R., half a mile from farm.

PLEASE MENTION FARMER'S ADVOCATE.

Points of Excellence.

A FEW REASONS WHICH ARE RAPIDLY MAKING A NEW CATARRH CURE FAMOUS.

Stuart's Catarrh Tablets, the new Catarrh cure, has the following advantages over other catarrh remedies:

First: These tablets contain no cocaine, morphine or any other injurious drug, and are as safe and beneficial for children as for adults; this is an important point when it is recalled that many catarrh remedies do contain these very objectionable ingredients.

Next: Being in tablet form, this remedy does not deteriorate with age, or on exposure to the air, as liquid preparations invariably do.

Next: The tablet form not only preserves the medicinal properties, but it is so far more convenient to carry and to use at any time that it is only a question of time when the tablet will entirely supersede liquid medicines, as it has already done in the medical department of the United States Army.

Next: No secret is made of the composition of Stuart's Catarrh Tablets; they contain the active principle of Eucalyptus bark, red gum, bloodroot and Hydrastin, all harmless antiseptics, which, however, are death to catarrhal germs wherever found, because they eliminate them from the blood.

Next: You cannot cure catarrh by local applications to the nose or throat, because these are simply local symptoms and such treatment can not possibly reach the real seat of catarrhal disease, which is the blood; for this reason, inhalers, douches, sprays and powders never really cure catarrh, but simply give temporary relief, which a dose of plain salt and water will do just as well.

Catarrh must be driven out of the system, out of the blood, by an internal remedy, because an internal remedy is the only kind which can be assimilated into the blood.

Stuart's Catarrh Tablets do this better than the old form of treatment, because they contain every safe specific known to modern science in the anti-septic treatment of the disease.

Next: The use of inhalers and spraying apparatus, besides being ineffective and disappointing, is expensive, while a complete treatment of Stuart's Catarrh Tablets can be had at any drug store in the United States and Canada for 50 cents.—Adv't om

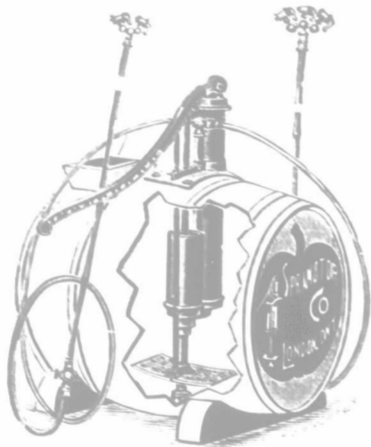
THE only reason why people buy inferior Spray Pumps is, they don't know the difference.

They have no good excuse for this when they can get a Copyrighted Treatise on Sprayers and Spraying by sending their address on a postal card.

They had better buy cheap seeds than inferior sprayers, for cheap seeds means only the loss of the season's crop, whereas the use of a poor sprayer means the loss of the chemicals, labor, crop and the outlay for the sprayer.

To save the farmers from this, the Government had a contest of all sprayers, and the judges stated in their award that the SPRAMOTOR was best.

Don't you think their judgment is worth your consideration? There are hundreds of Spray Pumps, but only one SPRAMOTOR. "Every word's true."



You can paint your buildings with the Spramotor, as well as kill your wild mustard. Send postal card for catalogue, Box "A." It's free. We pay the postage.

SPRAMOTOR Co.,

68-70 KING ST. LONDON, CAN.

FOR SALE.

CLYDESDALE stallions, mares and fillies, representing the best blood in Scotland—Prince of Wales, Barnly, McGregor and Lord Lyon—in-cluding the great sweepstakes winner, The Marquis (1182), a grandson of Prince of Wales and McGregor; also the first-prize 3-year-old at Ottawa this season.

THOS. GOOD,

Richmond P. O., Ont. R. R. Station, Shitsville, C.P.R.

ROBT. NESS & SONS, HOWICK, QUE.

BREEDERS AND IMPORTERS OF Clydesdale Horses & Ayrshire Cattle

Also the leading breeds of fowls for the farmers.

Rosedale Stock Farm.

CLYDE AND SHIRE HORSES. SCOTCH SHORTHORNS. LEICESTER SHEEP.

Six choice Shorthorn bulls, Scotch and Scotch topped, from 11 to 13 months (red and roan), good quality. Prices right.

My motto, "The best is none too good."

J. M. GARDHOUSE, Highfield P. O. Malton Sta., G.T.R. Weston Sta., C.P.R.

Glover Leaf Lodge HERD OF Shorthorns

A number of choice young bulls, heifers and cows, excellent milking strains. Correspondence invited. R. CORLEY, Belgrave P. O., Ont., and G. T. R. Wingham, C.P.R.

Isaac Usher & Son, QUEENSTON, ONT.,

Manufacturers of QUEENSTON CEMENT. Proprietors of

Queenston Heights Stock Farm.

Shorthorn Cattle.

Herd headed by Lord Gloster (26995), by Abbotsford. We have for sale seven young bulls, 4 to 20 months; also young cows and heifers. Stock offered for sale sired by or bred to such noted bulls as imp. Guardsman, Royal Standard, Abbotsford, Lord Gloster, Indian Count.

P. O., TELEGRAPH AND TELEPHONE, QUEENSTON, ONT.

FARM 3 MILES NORTH OF NIAGARA FALLS.

THE BIG FOUR.

Great Premium Picture Offer

For obtaining new subscribers to the FARMER'S ADVOCATE at \$1.00 per year.

"Canada's Ideal"—Admitted by judges, breeders and artists to be the most magnificent engraving of high-class modern Shorthorns ever issued in any country. 24 x 36 inches. Twelve animals.

"Canada's Pride"—Nine celebrated draft horses.

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Your choice of any one of the above for ONE new subscriber, or all four beautiful pictures for only three new subscribers.

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

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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.

Handsome Curb-link Silver Bracelet with Padlock and Key,

For 2 new subscribers. For each additional new subscriber, two Sterling Silver Friendship Hearts.

Write for a sample copy of the Farmer's Advocate, and begin to work for these premiums right away. In every case cash must accompany the new names.

ADDRESS

The William Weld Co., Ltd., Winnipeg.

The Kinellar Lodge Dispersion Sale.

The dispersion sale of John Isaac's Shorthorn herd, at Markham, was an unqualified success, prices running higher than even the most sanguine expectations. This is the most gratifying in view of the fact that the great majority of the animals fell to the bids of Canadian breeders, the attendance of United States buyers being limited, owing to a combination of circumstances, among which was the occurrence of a number of large Shorthorn sales in the States at about the same time. Still, there was quite a helpful sprinkling of bidders from over the line, and a few of the animals went that way. Manitoba furnished the largest buyer, W. S. Lister, of Middlechurch, having claimed eleven head, at an average of \$382, while John E. Smith, Brandon, took three at an average of \$342. William Chalmers, Hayfield, Man., bought the bull calf, Banks o' Don, at \$390, and Thomas Speers, Oak Lake, took Fancy Ury at \$215, and the 8-months calf, Lord Roberts, at \$175. W. D. Flatt, Hamilton, secured the grand roan Kinellar Claret, year-old heifer, imp. Daisy 3rd, at \$1,600, the highest price of the day, and Rosebud 2nd at \$1,025. W. H. Gibson, for Senator Drummond, of Montreal, claimed the red yearling heifer, Lavender 2nd, by imp. Golden Measure, at \$1,000, the second highest, and the roan 2-year-old May Queen, by Lordly Archer, at \$700. The highest price for a bull was \$290, for the red 3-year-old imp. Nonpareil, bought by Hector Cowan, Jr., Paulina, Iowa. The most of the bulls were young and thin, and were not expected to sell high, but they made fair prices. The average for the 44 females sold was \$418.41; for the 8 bulls, \$278.13. The total of the sale was \$21,955, an average for the 52 animals sold of \$422.22, which is considered a very satisfactory result, in view of the fact that nearly one-third of the young things were in only very moderate condition, owing to the privations of recent importation and quarantine. Col. Carey M. Jones, Davenport, Iowa, as auctioneer, ably conducted the sale, with the valued assistance of Mr. John Smith, M. P., P. Brampton, and Capt. T. E. Robson, M. P., Ilderton, Ont. There was a very large attendance of breeders and farmers, and a considerable degree of enthusiasm prevailed, congratulations on the success of the sale being freely expressed. It was a very good closing sale for the year and the century in Canada. We give below a list of the animals sold, with prices and buyers:

COWS AND HEIFERS.

- Aggie Douglas (imp.), W. G. Pettit, Burlington, Ont., \$420.
- Belinda 5th (imp.), G. Harding & Son, Waukesha, Wis., \$420.
- Best Ury, W. H. Hogg & Son, Thamesford, Ont., \$460.
- Carnation (imp.), A. & D. Brown, Iona, Ont., \$365.
- Cherry Ury, W. S. Lister, Middlechurch, Manitoba \$400.
- Cinderella 4th (imp.), W. G. Pettit, Burlington, Ont., \$390.
- Claret Cup 6th (twin) (imp.), Wm. R. Watt, Salem, Ont., \$500.



Elgin Watches

are tested and tried by extreme heat and cold at the factory and adjusted to withstand varying temperatures.

Genuine Ruby Jeweled Elgins

are sold by all Jewelers in sizes and styles to suit, and at reasonable prices.

An Elgin Watch always has the word "Elgin" engraved on the works—fully guaranteed.

Booklet Free.

ELGIN NATIONAL WATCH CO.
ELGIN, ILL.

W. R. Bowman. Mt. Forest, Ont.



We have five choice young bulls of various ages, also a few in-calf heifers and cows from prize-winning stock, which we will dispose of at reasonable prices. We also offer for sale sixty Shropshire and Suffolk Down ewes of excellent breeding and quality, at from \$10.00 to \$15.00 each. All stock registered.

YOUNG SHORTHORNS FOR SALE.

Our present offering includes several choice young bulls fit for service, sired by "Scotland Yet," and out of Warfare (imp.) dams; also bull calves, from Blue Ribbon (imp.), and out of Royal George cows. Inspection and correspondence solicited.

A. & D. BROWN,
M. C. RAILWAY, IONA, ONTARIO.

PLEASE MENTION FARMER'S ADVOCATE.

- Claret Jug (twin) (imp.), W. S. Lister, Middlechurch, Man., \$600.
 - Clymnestra (imp.), John Miller & Sons, Brougham, Ont., \$325.
 - Columbine (imp.), H. Golding & Son, Thamesford, Ont., \$340.
 - Countess 2nd (imp.), W. S. Lister, \$400.
 - Daisy 3rd (imp.), W. D. Flatt, Hamilton, Ont., \$1,600.
 - Damsel 3rd (imp.), W. G. Pettit, \$175.
 - Damsel 4th (imp.), W. S. Lister, \$300.
 - Elsie 2nd (imp.), W. S. Lister, \$345.
 - Fancy Ury, Thomas Speers, Oak Lake, Man., \$215.
 - Glad Welcome 2nd (imp.), P. Stewart, Atha, Ont., \$405.
 - Golden Belle (imp.), John E. Smith, Brandon, Man., \$335.
 - Hawthorn Blossom 10th (imp.), George Swan, Vasey, Ont., \$420.
 - Jilt 21st (imp.), W. S. Lister, \$400.
 - Lady Dorothy 31st (imp.), W. S. Lister, \$420.
 - Lady Emma (imp.), Capt. T. E. Robson, Ilderton, Ont., \$290.
 - Lady Jane (imp.), John E. Smith, \$400.
 - Lady of Promise (imp.), W. S. Lister, \$400.
 - Lavender 2nd, Senator Drummond, \$1,000.
 - Lustre (imp.), W. S. Lister, \$400.
 - Martha 6th (imp.), Hector Cowan, Jr., Paulina, Iowa, \$500.
 - Martha 9th (imp.), W. B. Watt, \$625.
 - Maryculter Princess (imp.), W. S. Lister, \$390.
 - May Queen (imp.), Senator Drummond, \$700.
 - Mina Girl (imp.), W. S. Lister, \$275.
 - Nancy Lee (imp.), Hector Cowan, Jr., \$250.
 - Pride 16th (imp.), James Thompson, Belton, Ont., \$300.
 - Primula (imp.), W. J. Biggias, Clinton, Ont., \$395.
 - Queen Esther 20th (imp.), Hector Cowan, Jr., \$345.
 - Rosebud (imp.), George Mitchell, Newcastle, Ont., \$300.
 - Rosebud 2nd (imp.), W. D. Flatt, \$1,025.
 - Rosemary 2nd (imp.), A. Montague, Thamesford, Ont., \$320.
 - Rosemary 3rd (imp.), Walpool Bros., Rock Valley, Iowa, \$270.
 - Rosetta 9th (imp.), W. G. Pettit, \$400.
 - Ury Garnet, J. E. Smith, \$200.
 - Ury Gem, Walpool Bros., \$300.
 - Watercress (imp.), Goodfellow Bros., Macville, Ont., \$420.
 - Winning Witch (imp.), Cookson Bros., West Branch, Iowa, \$610.
- BULLS.**
- Banks o' Don (imp.), Wm. Chalmers, Hayfield, Man., \$300.
 - Golden Earl, Chas. Younge, Brookdale, Ont., \$135.
 - Lord Roberts, Thomas Speers, Oak Lake, Man., \$175.
 - Nonpareil (imp.), Hector Cowan, Jr., Paulina, Iowa, \$600.
 - Pilgrim (imp.), J. I. Davidson, Balsam, Ont., \$200.
 - Royal Hope (imp.), D. S. Shantz, Haysville, Ont., \$365.
 - Sir Christopher (imp.), George Prout, Zephyr, Ont., \$290.
 - Sittytown Hero 3rd, Edward Green, Indianola, Illinois, \$160.

HORSEMEN! THE ONLY GENUINE IS GOMBAULT'S CAUSTIC BALSAM.

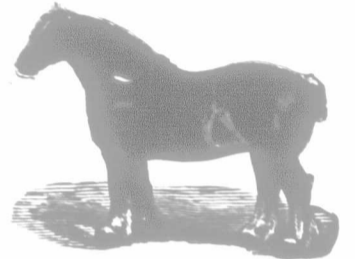
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The Safest, Best BLISTERS ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY or FIRING. Impossible to produce scar or blemish. Every bottle is warranted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

THORNCLIFFE Stock Farm

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

"LYON MACGREGOR."



Stallions and Colts

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

A visit to Thorncliffe will well repay you

ROBT. DAVIES,
Thorncliffe Stock Farm, TORONTO.

PLEASE MENTION FARMER'S ADVOCATE.

TROUT CREEK HERD OF SHORTHORNS.

Since our Chicago sale we have imported sixty-two head, including some Royal winners: they were pronounced in Scotland superior to past importations. We try to import the best, believing that this is one of the ways to assist in improving the breed on this side of the water. Being thoroughly convinced, also, that a bull of the right sort is even more than half the herd, we have decided to keep the following four choice ones:

Imp. Lord Banff.

Bred by A. Watson; of the Campbell Bessie family.

Imp. Consul.

Bred by J. D. Fletcher; of the Campbell Claret family. Consul was awarded first at Edinburgh, first and champion at Provincial Union, first and champion at Creiff, and second at the Highland. His sire, Watchword, bred by Wm. Duthie, was first at the Highland in 1895 and 1896, and got by Scottish Archer, Watchfire, by Watchword, was first at the Highland, 1897. Consul is the highest-priced bull imported to Canada.



IMP. EMPRESS 12TH.
First prize, Royal Show, 1900.

Imp. Silver Mist.

Bred by Wm. Duthie; of the famous Missie family. He had many friends for first choice at Messrs. Marr and Duthie's sale. Mr. Beck, representing the Prince of Wales, made next to last bid.

Imp. Wanderer's Last.

Bred by W. S. Marr; also of the Missie family. Is the last calf got by that renowned Cruickshank bull, Wanderer. Mr. Marr considers this youngster very promising.

W. D. FLATT,
378 Hess Street South, HAMILTON, ONT.

Jas. Smith, Manager.

W. D. Flatt is a well known breeder of both imported and Canadian bred Shorthorn cattle. He has a large herd of the best of both, and is always ready to supply the demand. He is also a breeder of the best of both, and is always ready to supply the demand.

Hamilton is a city of over 100,000 inhabitants, located on main line of Grand Trunk Railway, between Chicago and Buffalo; also connected by Canadian Pacific Railway and Michigan Central Railway—branch lines.

JANUARY 3, 1901

THE FARMER'S ADVOCATE.

33

JOHN DRYDEN,
BROOKLIN, ONTARIO,

OFFERS SIX YOUNG SHORTHORN BULLS, ready for service, at reasonable prices. Strong, active, masculine.

GOOD QUALITY AND CHOICE BREEDING.

R. MITCHELL & SON,
Burlington Jct. Station, Nelson, Ontario,
Breeder and importers of

SCOTCH SHORTHORNS.

Offer for sale:
12 Canadian-bred females.
11 Imported females.
4 Imported bulls.
7 Canadian-bred bulls.



90 HEAD

High-quality, Early-maturing Herefords. Prizewinners. Young bulls, cows, heifers.

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

H. D. SMITH, COMPTON, QUE.

HOLSTEINS
FOR SALE.

I AM now offering 4 royally-bred Holstein bulls: Regulator DeKol, Pompous DeKol, Jessie 3rd's Inka DeKol, DeDicker's DeKol. All from heavy-milking dams, closely related to DeKol 2nd and Netherland Hengerveld, the greatest of Holstein cows.

J. A. CASKEY, Madoc, Ont.

HEREFORDS FOR SALE.

THE HERD of upwards of 90 head of registered animals contains the blood of the best English herds, with imported True Briton and Likely Lad at the head. Stock of both sexes and all ages for sale. Correspondence or a personal visit invited.

A. S. HUNTER, DURHAM, ONT.

Shorthorns and Leicesters.

Herd Established 1855.

A number of young bulls, cows and heifers for sale. Herd headed by imported Christopher 28859, and Duncan Stanley = 16364 =, Grand milking cows in herd. Also a number of Leicesters of both sexes, from imported foundation.

JAMES DOUGLAS, CALEDONIA, ONT.

SPRINGBANK FARM.

Shorthorn Cattle, Oxford Sheep, and Bronze Turkeys. Young bulls for sale.

JAS. TOLTON, WALKERTON, ONT.

SHORTHORN CATTLE AND LINCOLN SHEEP.

Imp. Prime Minister 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.

Bonnie Burn Stock Farm

Forty rods north of Stouffville station, Ont., offers 5 Shorthorn bulls and some heifers, 30 Shropshire rams and ewes from Imp. and Canadian-bred sires, at reduced prices.

D. H. RUSSELL, Stouffville, Ont.

SHORTHORNS AND BERKSHIRES.

Young bulls, six to twelve month old; cows and heifers. Berkshires (various ages, either sex), and Embden geese.

MAC. CAMPBELL, Northwood, Ont.

Maple Lodge Stock Farm

ESTABLISHED 1854.

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

LEICESTERS—Imported and home bred—the best.

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

Shorthorns FOR SALE:

12 young bulls.
10 yearling heifers and heifer calves.
16 2-year-old heifers and young cows,
several well advanced in calf to Precious Stone (Imp.). Prices moderate. Write for particulars.

G. A. BRODIE, Betheda, Ont.

A QUICK, SHARP CUT hurts much less than a bruise, crush or tear. Done with the **DEHORNING KEystone KNIFE** is the safest, quick, sharp cut. Cuts from four sides at once. Cannot crush bruise or tear. Most humane method of dehorning known. Took highest award World's Fair. Write for free circulars before buying.

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NO BACKACHE. NO WEIGHTS TO BE CARRIED. NO Saws DOWN TREES.

ON THE FOLDING SAWING MACHINE. It is made in Essex Centre, Ontario. It saws down trees. Saws any kind of timber on any ground. 9 CORDS BY ONE MAN IN 10 HOURS. Send for free illustrated catalogue showing latest improvements and testimonials from thousands. First order secures agreement. Address Main Office, Folding Sawing Mach. Co., 55 N. Jefferson St., Chicago, Ill.

R. & S. NICHOLSON
SYLVAN P. O., PARKHILL STATION,
IMPORTERS AND BREEDERS OF
SHORTHORN CATTLE,
OFFER FOR SALE

7 Imp. cows.
3 Imp. heifers.
7 Yearling heifers.
7 Yearling bulls.
9 Cows.

ARTHUR JOHNSTON
Greenwood, Ontario, Canada.
HIGH-CLASS
SCOTCH SHORTHORNS
(First Importation Made in 1874.)

(My recent importation of 30 head has just arrived home from quarantine. Herd now numbers over 120 head.)

OFFERS FOR SALE

40 Imported Cows and Heifers,
40 Home-bred Cows and Heifers,
11 Imported Bulls and Bull Calves,
13 Home-bred Bulls and Bull Calves.

Railway stations—Pickering, on main line of Grand Trunk Railway, 22 miles east of Toronto, and Claremont, 23 miles east of Toronto, on the C. P. Railway. Catalogues on application.

High-class Shorthorns and Yorkshire Pigs.
One very superior bull, about 17 months old; three bulls about 5 months old, from imp. stock; cows and heifers due to calve this fall. Forty Yorkshire pigs, 2 months old, from imp. stock; imp. boar, 2 years old, and sows due to farrow soon. Write, or come and see us.

JAS. McARTHUR, GOBLE'S, ONT.
Goble's Station, G. T. R., 10 miles east of Woodstock, 2 miles from farm. Visitors met.

SPRING GROVE STOCK FARM

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

Apply
T. E. ROBSON, Ilderton, Ont.

HAWTHORN HERD OF DEEP-MILKING SHORTHORNS.
We are offering 8 young bulls for sale, of first-class quality, and AI breeding.

Wm. Grainger & Son, - London, Ont.

FOR SALE:
SHORTHORN BULLS AND HEIFERS from such sires as Mariner (imp.), Royal Judd 17499, Sultan Selam (imp.), Grenadier 26251, and Roseville Abbott 30871, on a Victoria foundation. Also one extra Kinellar Stamp 10-mos. red bull. Come or write.

HERON COUNTY, THOS. CUDMORE & SON, EVERETT STATION, Hurondale, Ontario.

FOR SALE:
Shorthorn Bulls, Cows and Heifers, carrying a combination of Scotch top crosses, and tracing through many popular strains on the dam's side.

—on F. A. Gardner, Britannia, Ont.

SHORTHORNS FOR SALE
Cows and heifers, also a few young bulls. I have employed sons of Lord Lovel, Royal Member, Perfection, Indian Chief, and Clin Campbell, on Lord Lovel and Abbotsburn females.

—on WM. HAY, TARA, ONT.

PLEASE MENTION FARMER'S ADVOCATE.

J. & W. B. Watt, SALEM, ONT., BREEDERS OF Clydesdale horses, Scotch Shorthorn cattle, Leicester and Oxford sheep, Berkshire pigs.

Our SHORTHORN herd was founded over 30 years ago, and contains such tribes as the Village Buds, Matchless, Missies, Mildreds, Stamfords and English Lady, upon which we have employed such bulls as Barmpton Hero 324, Young Abbotsburn 6296, Challenge 2833, Perfection 9100, Lord Lansdowne (imp.) 2712, Clan Stuart 14381, Canada 19536, Sittlyton Chief 17000, Royal Sailor (imp.) 18959, Royal George 28513, Clipper King 16293 and Judge 23419, all of which have been first-prize winners wherever shown. Royal Victor 34681 and Royal Wonder 34682, by Royal Sailor (imp.), and out of English Lady and Mildred dams, now head the herd, assisted by Roan Cloud 31317, by Lord Glasgow 28985, and out of Melody 21992, a descendant of the Buckingham family. We are now offering young bulls, cows and heifers for sale, of Scotch type.

Farm 2 miles from Elora Station, G. T. R. and C. P. R., 15 miles north of Guelph.

The Breed THAT FIRST MADE Hillhurst Famous

FIVE GRAND YOUNG SHORTHORN BULLS FOR SALE. 9 to 12 months old—registered; bred from milking strains; hardy and active, having been reared in a natural manner on pasture. Prices moderate. Special inducements to clubs. A choice lot of

SHROPSHIRE

Ram and Ewe Lambs, by imported rams of Mansell's and Harding's breeding. HAMPSHIRE, THE GOLDEN-FLESHED, Ram Lambs all sold. Next crop due January, 1901. Ready for service in August.

M. H. COCHRANE,
HILLHURST STATION. COMPTON CO., P. O.
117 miles from Montreal, on Portland Div. Grand Trunk Ry.; 12 miles from Lennoxville, C. P. R.

T. Douglas & Sons, BREEDERS OF
Scotch Shorthorns,
STRATHROY, ONT. 100 head to select from.

Offer for sale 30 young bulls, and cows and heifers of all ages, of the most approved breeding, bred to (imp.) Diamond Jubilee = 28861 =, at head of herd. Farm one mile north of town.

W. G. Pettit & Son, IMPORTERS AND BREEDERS OF
Scotch Shorthorns and Shropshire Sheep
FREEMAN, ONT.

OFFER FOR SALE:

20 Imp. bulls.
40 Imp. cows and heifers.
6 Home-bred bulls.
30 Choice Home-bred heifers—1, 2 and 3 years old.
25 Ewe lambs.

Our importation of this year arrived home August 17th, and is one of the largest made this year. Selected by ourselves from the leading herds in Scotland.

Our new Catalogue, with full information, is now ready to mail.

Burlington Junction Station, Telegraph and Telephone Offices, within half a mile of farm.

THE NATIONAL FARM Cream Separator

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

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

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

W. G. GLENN,
469 ONTARIO ST., LONDON, ONT.,
Agent for the Counties of Middlesex and West.

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

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

SHORTHORNS

Cows, heifers and bulls ready for service, by Scottish Chief = 27244 =, by Scottish Pride (imp.). Dam Fane's Gem, by Guardsman (imp.).

BERKSHIRES.

Modern type, well-bred boars and sows, all ages.
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ALEXANDER LOVE,
EAGLE, ELGIN CO., ONT.

Shorthorns, Cotswolds, & Berkshires

Our Shorthorn herd was founded on Bates and Cruickshank blood, upon which we have employed only Scotch-bred bulls. 60 to select from. We are now offering an extra choice lot of young bulls and heifers from Duchess of Gloucester and Miss Ramsden sires, on Cecelia and Anchovy dams. Also Cotswolds, shearlings and lambs, and Berkshire pigs.

-om
F. BONNYCASTLE & SON, Campbellford, Ont.

SHORTHORN BULLS FOR SALE.

We have Cruickshank Lovely, Fashions and Stamford females, and Matchless females bred by J. & W. B. Watt, Salem, Ont., with Lovely Victor 22170 at the head. **T. MERCER, MARKDALE, ONT.**

FOR SALE.

6 YEARLING JERSEY BULLS, sired by Brampton's Monarch (imp.), and from tested cows; also registered and high-grade springer.
-om
B. H. BULL & SON, BRAMPTON, ONT.

Butter Jerseys

FOR SALE:
A granddaughter of Louise of H, the great cow whose yield and cost of feed were published in F.A., 8 months old; a son of Bella of H, full sister in blood to Louise, 7 months old; a great-granddaughter of the famous cow, Massena (900 lbs. butter in one year), 19 months old, and in calf.

MRS. E. M. JONES,
Box 324. -om- **BROCKVILLE, 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.

Maple City Jerseys.

One Jersey bull two years old. Some very choice bull calves from 2 to 5 months old, and a few high-grade heifers and heifer calves. All of the choicest breeding. Write for prices.
-om

Box 552. W. W. EVERITT, Chatham, Ont.

WE WANT TO SELL A FEW Holstein Heifers, coming 2 years old or a few young Cows.

THEY are of the richest and largest producing strains, fine individuals, and bred to as good bulls as there are living. We have a few bull calves and yearling bulls also for sale.

HENRY STEVENS & SONS,
LACONA, OSWEGO CO., N. Y.

BROOKBANK

Is headquarters for Holstein bulls. They are going fast; be quick if you want one. In writing, state age, etc., preferred.
-om

GEO. RICE,
Oxford Co. Currie's Crossing, Ont.

Maple Glen Stock Farm.

The home of officially tested, Advanced Registry, dairy test and showing-winning **HOLSTEINS**, of Carmen Sylva now for sale. Price is in keeping with breeding and performances.
-om

C. J. GILROY & SON,
Brockville, on C.P.R. or G.T.R. **Glen Buell, Ont.**

Maple Hill Holstein-Friesians

SPECIAL OFFERING:
Two yearling bulls (prizewinners), sired by DeKol 2nd's Paul I eKol Duke. Five bull calves, sons of Count Mink Mercedes and Daisy Teake's King. Also several yearling heifers in calf. Will make special prices to reduce stock before winter.
-om
HARRISBURG STN., G.T.R. G. W. CLEMONS,
GALT STN., C.P.R. ST. GEORGE P.O., ONT.

Maple Cliff Dairy and Stock Farm.

FOR SALE:
Ayrshires—6 yearling bulls, females any age.
Tamworths—40 boars and sows of different ages.
Berkshires—3 boars, a number of sows.
-om

R. REID & CO., Hintonburg,
Farm 1 mile from Ottawa. Electric cars to farm. -om

PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

CAVAN & DURHAM'S NEW IMPORTATION OF BERKSHIRES.

The above-named firm have established their headquarters within ten minutes' walk of the terminus of the Kingston road electric car, Toronto, and a mile and a half east of the York station, on the Grand Trunk, their shipping point. Mr. Cavan, having had a large experience in the selection and fitting of Berkshires, both in Canada and the United States, has within the past few months made selections from the large American herds, a long string of young sows and boars, also a few matured and tried English and American bred sows, which proved their worthiness on American soil. Among the matured matrons we found Lady Haldimand, 18961, which formerly came from the herd of Burbridge, South Wrexham, Eng. She is a sow of superior merit and Berkshire character, and has proven herself to possess sure and prolific merit. Four of her June sows to Fitz Majestic accompany her to her new home. They are typical Berkshires of the early maturing sort, which, with proper management, should easily make show animals, having the requisite quality, well-fleshed hams and backs, and especially good around the hearts. Their heads are of the true Berkshire. Another English sow of importance to the firm and breed is the 4-year-old Holyrood 11th 2307, by Goliath, and out of Holyrood 5th 4247. She was bred by E. Hayter, White Church, England, and since coming to American soil has not only attracted much attention as a show sow, but has proven herself a matron worthy of her high type and character. Elphick's Matchless, by Safeguard, and out of Sweet Pippin, also accompanies the string, and those most familiar with Berkshires and their showyard records will recognize this sow as one of the chief attractors in her yearling form, when she won 22 1sts and sweeps in England, while the two former were among the chief winners in England and Canada in their show days. Elphick's Matchless now suckles a choice litter of ten to Fitz Majestic (Dec. 1st). Four very choice April boars were shown us, sired by Elma Harvester, a son of the noted Great Eastern, and out of the noted Benjafield Bernice Lad, and tracing to the noted Benjafield Bernice family, which won immense showyard fame in England. They are a bunch possessing individual merit, with splendid backs and hams, standing on short legs, and having splendid heads and good markings; while in another pen we saw a superior young boar in Lord Windsor 2nd, by Elma Harvester, a son of Lord Windsor, and Kathleen Windsor, by Lord Windsor, and tracing to Sally 928, that fetched \$1,000 for Mr. T. S. Cooper, and to which the firm intend breeding a portion of their young sows, being a boar whose quality corresponds with the high type of his breeding. The present stock boar, Fitz Majestic 8977, being a grandson of the noted Lord Windsor, has given the young things in the herd a popular strain of breeding of the most desired sort. A long string of sows, farrowed during and since the early spring, carry breeding of equal merit to those already mentioned, being intermixed with Lord Windsor, Fitz Majestic, Bernice, and other popular tribes. We found them in good growing form and true in Berkshire conformation. The firm in full capacity will carry at least 20 brood sows, and intend to keep a list of sires at the head whose breeding and individuality will attract the attention of the best buyers, with whom they hope to do business.

SHOW AYRSHIRES FOR SALE.

As we are not going to show any cattle at the fairs this year, we will sell the imported prizewinning bull, Napoleon of Auchenbrain, champion and head of first prize herd at Toronto, 1898. Also first-class 2-year-old bull and three choice bull calves of last fall. These are all fit for the showing, as we kept them for that purpose. For prices and particulars come and see, or write. **James Boden, Mgr., St. Anne de Bellevue, Quebec.**
Farm close to St. Anne Station, Quebec.
G.T.R. & C.P.R., 20 miles west of Montreal. -om

Ayrshire Bulls.

Write to **J. YULL & SONS,** Carleton Place, for special prices on Ayrshire bulls from 14 years to 6 months. Four over 15 months, fit for service, from special milking stock. Sired by prize bull, Jock of Burnside—1684—, also females of all ages. Shropshire sheep of all ages; a number of fine ram lambs. Berkshire pigs of either sex, of the best bacon type. B. P. Rocks. -om

AYRSHIRE CATTLE AND POULTRY.

Three prizewinning bull calves, 8 mos. old, from 30 to 35 dollars each. One fine bull calf, 3 mos. old, 25 dollars. All fashionable color and choice breeding, from dams with heavy milk records and fine show qualities, and sired by Royal Star of the Ste. Anne's, first-prize bull at Toronto and London. Females all ages. Prices right. Twenty varieties of chickens, Pekin ducks. Also ten pair Toulouse geese, from \$4 00 to \$5.00 per pair. For particulars, write—**WM. THORN,** Norfolk Co. Trout Run Stock Farm, Lynedoch.

FAMOUS ALL OVER THE WORLD. ALFRED MANSELL & CO., LIVESTOCK AGENTS AND EXPORTERS, SHREWSBURY.

BRITISH STOCK selected and shipped to all parts of the world. Write for prices to **ALFRED MANSELL & CO.,** Shrewsbury, England, or to our American representative, Robert Miller, Stouffville, Ont., Canada.

Present Offering:

Dorset ewes in lamb.
Dorset ewe lambs.
Chester White sows (June litter).
-om

For particulars, write to **R. H. HARDING, THORNDALE, ONT.**

IN WRITING PLEASE MENTION FARMER'S ADVOCATE.

Rapids Farm Ayrshires.

REINFORCED BY A RECENT IMPORTATION of 20 cows, 2 bulls, and a number of calves, selected from noted Scotch herds, and including the male and female champions at leading Scottish shows this year. Representatives of this herd won the first herd prize at the exhibitions at—

Toronto, London, and Ottawa, in 1900.

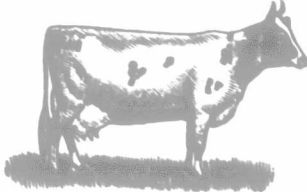
Come and see or write for prices.

Young Bulls and Heifers for Sale, bred from High-class Imported Stock.

Robert Hunter, Manager

for W. W. Ogilvie Co., Lachine Rapids, Quebec.

Ayrshires, Guernseys, Shropshires, Yorkshires for immediate sale.



SOME fine Ayrshire bull calves. A few Shropshire ram lambs. A few choice Yorkshire pigs.

Kindly note that Mr. T. D. McCallum has no further connection with this farm, either directly or indirectly. All correspondence should be addressed to

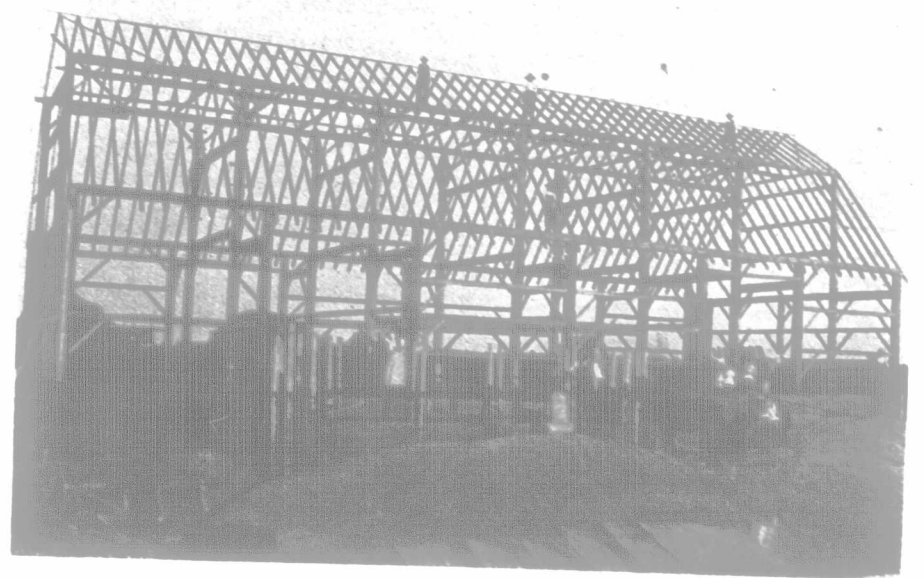


ISALEIGH GRANGE FARM, Danville, Quebec.
J. N. GREENSHIELDS, PROP.

Warm, Dry, Comfortable Stabling Secured

Battle's Thorold Cement.

A LAMBTON FARMER SPEAKS OF IT.



BASEMENT BARN OF MR. FRED. LAMPMAN, WYOMING. Dimensions 42x100, with Root Cellar 11x35 under approach. Height of wall 10 feet.

Read the opinion of Mr. Fred. Lampman, Wyoming, Ont.

ESTATE OF JOHN BATTLE, Manufacturers of Thorold Cement, Thorold, Ont.:
GENTLEMEN,—Having this summer erected a barn with concrete basement and floors made with your Cement, I think it only fair that I should express my opinion of your famous Cement for building walls and floors.

To make a long story short, I am entirely satisfied with my wall, which is equivalent to saying I have a wall superior in every respect to one built of either brick or stone, and very much cheaper. My barn is 42x100, with root house under the approach, 14x35. My wall is a trifle over 10 feet high; the bottom, 18 in. is from 18 to 24 in. thick, and the rest 12 in. One hundred and eighty barrels of your Cement, purchased from your agent, Mr. Alex. E. Wark, did the job. The walls were made one of Cement to five of gravel. The floors were made 3 in., one to six, 1 1/2 in. on top one to two. I might just say that all floors should be put down in August or beginning of September, which gives them ample time to harden before they need to be used. If this point is observed, I consider your Cement equal to Portland for floors. The walls were built under the supervision of your Mr. N. B. Hagar, whom we consider a first-class man.

I don't think I need say any more in regard to the quality of Thorold Cement. My wall is here for inspection, which in reality is the best testimonial for your Cement. In conclusion, however, I might just say that I consider your Cement one of the greatest blessings that has come within the reach of Ontario farmers, as now there are few farmers who cannot, by a small expenditure of money and a little work, have a warm, dry, comfortable stable, which will be the great essential to success during the twentieth century.

FRED. LAMPMAN,
Plympton Township, Lambton Co.

Estate of JOHN BATTLE, Thorold, Ont.

Choice Ayrshires, W. W. Chapman, and Barred Rocks.

A number of cows and heifers in calf to Glenore Sultan. Several choice young bulls.

Plymouth Rocks of both sexes from prizewinning birds.



JAS. McCORMACK & SONS,

ROCKTON, ONTARIO.

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. -om