

**PAGES
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FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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VOL. XXXIII.

LONDON, ONT., AND WINNIPEG, MAN., JANUARY 15, 1898.

No. 446.

EDITORIAL.

Early Publication of Prize Lists.

The example set by the Royal Agricultural Society of England in the early preparation and publication of the prize list for their next annual show is worthy of attention and adoption by the directors of the leading fair associations in the Dominion. The Royal Show for 1898 is announced to be held at Birmingham, June 20th to 24th. The prize list was issued in December, and entries at ordinary fees must be made by April 15th. Post entries may be tendered up to May 14th at extra fees, after which no entries will be accepted. It is in all fairness due to intending exhibitors that they be informed at the earliest possible date of the exact classification and of any changes in the prize list, or any new requirements in regard to the preparation of stock. The work of preparing animals for exhibition is not properly accomplished in a few weeks, but should be a gradual process extending over nearly the whole year, so that no undue forcing is resorted to; and since changes are frequently, perhaps too frequently, made in the prize list, these should be made known at an early date, so that exhibitors may govern themselves accordingly. There is, in our opinion, no good reason why these announcements may not be made earlier in the year than has been customary, and those for the winter shows especially, as well as the date and place for holding them, may just as well be decided and published very soon.

The February Breeders' Meetings.

The announcements in this issue of the holding of the annual meetings of the various stock breeders' associations are of special interest to all the members of these organizations and to those who are in any way interested in pure-bred stock. The increasing demand for improved stock of all classes and the substantial advance in prices will doubtless renew the interest in these meetings, and result in a larger attendance, which is a desirable consummation, as in the multitude of counsellors there is wisdom, and full meetings are more likely to produce enthusiasm than are slimly-attended ones. There is inspiration in numbers, and it is hardly possible to mingle with the intelligent, enterprising and practical men who make up these associations without learning something that will be helpful in the prosecution of one's own business, while the intercourse of breeders frequently results in business transactions which more than repay the expense involved in attending the meetings. The Jersey breeders have set a good pace in their annual meeting held last month by attending in larger numbers than for many years past, electing live officers, and resolving to make a strong effort to enlist the interest and co-operation of every man who owns a cow of the breed. This is the spirit which should be shown by each association, and which leads to success. We are glad to know that registrations in the various Canadian herd and stud books have largely increased during the past year, with still better prospects for 1898, as a result of the revival in business, particularly that of the stock-raiser, throughout the Dominion. The demand for horses, particularly the heavy sorts, as well as other classes of live stock, is at present showing a very marked improvement over previous years, one feature being increasing importations of breeding stock from the Old Country, all of which

but emphasizes the importance of preserving our records intact, maintaining them at a high standard, and in accordance with the wishes of the majority of breeders. The Ayrshire breeders will, we understand, discuss the question of the appendix. Business of importance, including the election of officers for the ensuing year, will be transacted at all the meetings, and we trust members will make a special effort to attend.

A Lightning Rod Fakir's Lie Exposed.

Joseph Fee, Maple Hill Farm, Durham Co., Ont., writes us: "I had a lightning rod man call on me and advise me to let him rod my barn. I told him I could make a rod of fence wire the same as described in the FARMER'S ADVOCATE. [NOTE.—For full details see our issues of August 2nd, September 1st and 15th, 1897.—EDITOR.] He said he knew the man well who recommended such a rod; in fact, he claimed to have persuaded him to take down his wire rods and rod his barn with lightning rods. Is there any truth in this statement?"

To the Editor FARMER'S ADVOCATE:

SIR,—In reply to your statement of lightning rod agent, would say that he does not exactly stick to the truth. He does not know me very well, whoever he is. I have not been importuned by a lightning rod agent for more than a year, though one operated in the neighborhood last summer. He saw the homemade rods on the barn and did not bother me, and the rods are still on the barn.

First and Fearless.

TO THE EDITOR FARMER'S ADVOCATE:

SIR,—I have no hesitation in publicly stating my opinion of the FARMER'S ADVOCATE. I consider it the very best agricultural paper published, not only in Canada, but in the United States as well. The manly and outspoken tone of its editorials, without fear or favor (those of December 1st, 1897, for example), would alone commend it to all lovers of right and justice. Canadians should feel proud of the ADVOCATE. "Hew to the line, let the chips fall where they may," is apparently its watchword. May it still further prosper.

J. A. MACDONALD.

King's Co., P. E. Island, January 3rd, 1898.

My confidence in them has been much strengthened by the very favorable opinions of authorities which appeared in the ADVOCATE. I not only think that they will do, but that they are much superior to the rods generally put up. My brother is just now getting similar ones put up on his buildings. The statements of that agent give us some idea of the kind of characters that prey upon farmers. Middlesex Co., Ont. THOS. BATT.

Where Agricultural College Graduates Go.

TO THE EDITOR FARMER'S ADVOCATE:

SIR,—In reply to your correspondent, I beg to state that it is not true that "a large percentage of the graduates of the Agricultural College, instead of going back to the farm, use the scientific knowledge obtained in a semi-professional capacity." The great majority (about 90 per cent.) of those who come to us from the farm and remain long enough to get a fair knowledge of our course of study and apprenticeship return to the farm with an increased liking for farm life and farm work. A few of those who take the advanced options of the third year engage in various kinds of professional work, generally, however, on agricultural lines or in pursuits closely allied to agriculture; but such graduates are only a very small proportion of those who leave the institution from year to year. Most of our students take only the two years' course, which is intended to fit young men for the farm; and farmers' sons who do so generally return to the farm. I may add that the Ontario Agricultural College is sending to the farm a far larger percentage of its students than any other college in existence.

JAS. MILLS, President.

Ontario Agricultural College, Dec. 28, 1897.

The Largest Creamery in Canada.

In the town of St. Mary's, Ont., is situated what is claimed to be the largest creamery in Canada. It is owned and operated by a joint stock company, of which Mr. McLeod, editor of the St. Mary's Argus, is secretary. The concern is managed by Mr. J. Stonehouse, and the butter is made by Mr. F. Dean, brother to Prof. Dean, of Guelph Dairy School. The buttermaking plant is supplied with cream from local patrons, besides six separating stations, the farthest of which is at Bennington, 16 miles distant. There are also others at Kintore, 15 miles distant; Kirkton, 10 miles; Metropolitan, 8 miles; and two others, 5 and 7 miles respectively. The patrons surrounding these various stations have their milk separated each day and return home with the skim milk. A sample of each patron's milk is taken and subjected to the composite test once in three or four weeks. The cream is brought to the creamery on three days of each week and the butter is made the days between. On the day of our visit, January 11th, the make was over 1,300 lbs., but an average day's make is 1,000 pounds, or 3,000 pounds per week.

The creamery opened December 15th, and since then weekly shipments of butter have been made by refrigerator system to England. Manchester has been the market shipped to, but the next lot will go to London. No returns have been made as yet, but about 19½ cents is looked for. Of this the patrons will get 16 cents, as the company charges 3½ cents per pound and bears all the expense of skimming stations, hauling the cream, making, etc. The creamery has capacity for making 20,000 pounds per week, which will probably be reached within a very few years.

The butter factory is an imposing white brick structure, modernly fitted and equipped. The ground floor, except in the office, is of Portland cement, and graded and grooved to facilitate drainage, etc. The building throughout is heated with steam. The milk received from local patrons is heated up as received and at once separated by two DeLaval machines having a combined capacity for 5,500 pounds per hour. The skim milk is pumped up to the second flat into a large tank and distributed to the patrons by means of a Buzzell graduated can, which is operated from the ground floor. The skim milk flows out through a pipe and hose into the cans on the patron's wagon. For each gallon of whole milk brought in each patron receives his due proportion. Just below the skim milk hose is the mouth of a tile drain filled in with finely broken stone so that the skim milk, washings, etc., which reach the ground are at once conveyed away below the surface, thus preventing any possibility of foul odor near the creamery from this source.

The cream as separated and received from the stations is at once pumped up to the ripening vats on the second floor. Of these there are four fitted with round bottoms and water jackets, each having a capacity for 400 gallons of cream. Mr. Dean expressed a preference for twice the number of vats, each with half the capacity.

The fresh cream when received into the ripening vats is supplied with a quantity of pasteurized "starter" and raised to 66° Fahrenheit. It remains at this temperature till 9 o'clock p. m. It is then cooled to 60°, and by churning time the following morning is usually down to 56°, when it is churned in large trunk churns in from 40 to 50 minutes. It is washed and then salted—one-half ounce to the pound—and worked for seven minutes in a modern revolving butter-worker which makes about three revolutions per minute. The butter-milk is pumped up into a tank on the second flat and is sold to a farmer for \$2.10 per ton of butter. The cream as churned contains about 40 per cent. of butter-fat.

After the butter is worked it is packed into 56-pound square spruce boxes, coated on the inside with melted paraffine and lined with heavy parchment paper. On the top of the butter and parchment paper is laid a one-quarter-inch scale board, which fills the space between the butter and lid. This scale board is soaked in strong brine for several hours before using. The cover is securely fastened down by screws, and the boxes are placed

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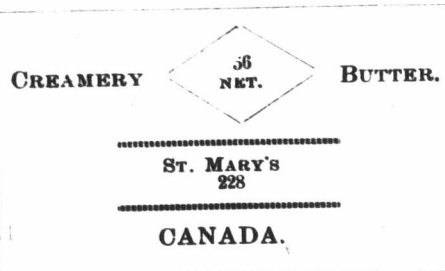
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in the cold room until shipped. Between the making room and the cold room is a cooling room in which the boxes of butter are prepared for the cold room, so that in hot weather the cold room door is left open as little as possible. The cold or refrigerator room is not yet fitted with a cooling system, but that will be done soon. Each box of butter bears the registered number of the creamery, together with a stamp somewhat similar to the following:



Mr. Stonehouse makes frequent visits to the various skimming stations, taking with him a small Babcock tester, which he uses when necessary. The tester used at the creamery is a 24-bottle turbine Babcock. Each skimming station is given a certain number, which is stamped on its cream cans and sample bottle boxes, so that each one is recognized at sight and each returned to its proper station. The entire concern is systematically managed and ably conducted.

Dr. Sankey's Letter on Tubercular Infection Indorsed.

To the Editor FARMER'S ADVOCATE:

SIR,—I have read with much interest a letter from the pen of Mr. Chas. A. Sankey, V. S., in your issue of Jan. 1st, on Tubercular Infection, etc., and I think it the very best contribution yet published on the subject. I believe he voices the opinions of the best-informed breeders on the subject. Such communications cannot fail to be advantageous as well as interesting to stock-breeders and the community at large. I am convinced that much needless alarm has been caused by Government officials and interested parties. I am firmly of opinion that there is not any more tuberculosis at present existing in pure-bred herds of the Province of Ontario than existed 25 years ago. There may be, and I have no doubt there does exist, more of the trouble than formerly in the large dairy herds, where cattle are tied up in great numbers in large and frequently badly-ventilated barns, kept at a high temperature in order to obtain the greatest possible returns from cows. Indeed, from careful observations during many years, I am convinced that it is impossible, without artificial means, to supply a sufficient quantity of fresh unused air to one hundred or even a much smaller number of cattle constantly confined in one building, and I am of opinion that governments could do vastly more real service to breeders and farmers by impressing on them the absolute necessity of a constant and abundant supply of fresh air and light. Cattle were never intended by nature to be huddled up in great barns through which not a breath of air stirs, so that one animal is constantly breathing the air that his neighbor had just exhausted of its life-giving properties and sometimes loaded it with disease-giving germs.

I have seen no big barn yet in which I think cattle safe, but I have seen many big barns, including the Government barns at Ottawa, well calculated to breed and distribute disease.

I say again, let governments teach the people that cattle cannot remain healthy without great abundance of light and fresh air—especially fresh air—air constantly in motion.

I am convinced that cattle are now kept in stables in which the temperature is too high for health.

Greenwood, Ont.

ARTHUR JOHNSTON.

STOCK.

Moderate Feeding of Roots to Breeding Ewes Approved.

To the Editor FARMER'S ADVOCATE:

SIR,—Referring to the article in your last issue on disputed points in winter sheep feeding, I wish to say: I like to feed a moderate quantity of roots to our ewes. I generally allow about four pounds per head, feeding them only once per day, and that about four o'clock in the afternoon, but when it is very cold I don't feed any. When the root crop has been a failure, I have had good results from feeding dry feed, using plenty of bran. I think there is but little danger in feeding ewes roots, if they have them in moderation and plenty of good dry food. The ewes will drink but little water when they are having roots, but I make it a point to keep water before them during the day. I should object to the ewes eating snow. One winter our ewes had snow for a drink, and that spring I had a number of lambs die from goitre. While I have never read of any proof of snow causing goitre, I am under the impression that it will. I do not approve of feeding whole roots to the ewes. It is all right when the ewes are about of an age, but when old and young run together, the young ones are apt to get more than their share. I generally scatter pea straw or some clover leaves around the yards on the snow to induce the ewes to take exercise. In regard to feeding ewes peas unthreshed, I should disapprove of it, as peas are too heating, and you cannot gauge the quantity per head the same as when threshed. I think the safer way to feed them would be after they were threshed, then you would know exactly what each sheep should receive. I should advise a feed of clover hay once a day, instead of feeding pea straw altogether; it helps make a variety. Have had good results from feeding shredded corn-stalks to our sheep once a day.

H. N. GIBSON.
Middlesex Co., Ont.

Exercise Essential for Breeding Ewes.

Exercise is in all cases to be given to sheep, confinement never even to be dreamed of by the shepherd, let alone compelling them to submit to it. They are, you know, at our mercy in this thing, same as any animal that is domesticated. They have not the freedom of their natural inclinations. We should, then, doubly see to it, and look after their welfare in this respect. We must give them as nearly their natural surroundings as possible. In fact, and in short, we would say upon the observance of this point depends the success or failure in sheep-raising; and further, the fact that they are so unlike the other domesticated animals in this one thing is the great cause of disappointment and discouragement to beginners in sheep husbandry. In proof of what we have said, allow us to make this statement: All countries where sheep-rearing has been and is most successful are those whose climates will allow them for the most months of the year to be held or grazed in open yards or broad fields in the wide open air, where a clean, wholesome, natural breeze can at all times sweep through amongst them, ridding the location of all accumulated bad gases and contagion. We are glad to say we can largely, very largely, supply these conditions for sheep in this country and climate. From early spring till late fall, through summer the conditions are proper. Our winter months are the only time of danger. If winter is open drive to fields during day whenever possible; don't mind a little snow. When this cannot be done, provide roomy, dry yards, allowing plenty of air circulation. We practice feeding roots whole to all young stock, and those of the flock whose teeth are in a condition to use. We think roots are in their best possible condition when whole for sheep. There may be some little argument in the inducement to activity this method affords. Our hard frost in the coldest winter months will not allow this practice; taking longer to eat them, the roots freeze readily, and are then not good. Dogs are the dread of the sheep-owner. We are sorry to say this is one of the unfortunate things, and presents the one dark side to the industry, more especially in this country where dog laws are so loose. The best arrangement we can see is to more strictly legislate against the freedom of the contemptible canine. The dog is allowed too much scope in this country. The Page wire fence is said to be dog-proof, and is recommended as a suitable enclosure for yards. Feeding roots to ewes during pregnancy we may say is not our practice, especially for the first four months; commence feeding one month before lambing time. Our practice is to feed roots (turnips) during January to the ewes of our flock that are lambing in February. You know we have all our ewes lamb early. Cannot give you any scientific reasons for the faith that is in us in this regard. The practice has been handed down to us by our fathers, and that only.

Huron Co., Ont.

W. W. COOPER.

An Advocate to Me.

Mr. James Dillon, Russell Co., Ont., when renewing his subscription to the FARMER'S ADVOCATE, writes: "I consider it a great privilege to thank you for your paper, the FARMER'S ADVOCATE. It has been an advocate to me, as I am now in a position to make dollars where I formerly couldn't make cents. I am now wintering 17 pigs where I used to keep one, and 20 head of cattle where I used to keep seven or eight."

Feeds Roots to Breeding Ewes, and Dips Twice a Year.

Feeding Roots to Pregnant Ewes.—My practice for nearly forty years with a flock of from 80 to over 100 of the following breeds, Cotswolds, Southdowns, and Oxfords, has been to feed from 5 to 8 lbs. of Swedish turnips daily, varying according to size and weight of sheep, in two feeds: pea straw first thing in the morning, and turnips, pulped, 9 o'clock a. m., and again at 4 o'clock p. m., and it has proved with me both a safe and beneficial practice, not having had in one instance in the period named one soft or watery bellied lamb; am feeding now 8 lbs. of turnips daily to my ewes, with pea straw, using no grain, but always make it a practice to feed my ewes a little grain (oats, with a few peas), from half to three-quarter pounds each of the mixture, with a little bran daily two weeks before lambing, reducing the amount of turnips about one-third when commencing to feed grain.

Feeding Peas Unthreshed.—Have never adopted the plan, from the fact that it is very difficult to gauge the quantity of grain you are feeding, and also from the fact that there is some waste attending the method where a large flock is kept. Think it a better plan to thresh the peas, and feed the straw and grain separate.

Dipping.—I always dip my lambs about a week or ten days after shearing the ewes, but do not dip the ewes, as nearly all the ticks leave the ewes and get on the lambs, but dip or pour both ewes and lambs in the fall or early winter. Think pouring is the best plan in the late fall or early winter, and quite safe if you choose a mild day and operate in the morning, and confine the sheep in a moderately warm place from twelve to twenty-four hours after dressing them. Have never used insect powder; have known it used with success so far as destroying the ticks, but do not think the effect on the wool is beneficial; would much prefer pouring with "Little's Dip" even in midwinter, confining the sheep after the operation, as already stated. If found necessary to dress pregnant ewes in winter, I only shed the wool down the back and pour on sufficient dip to run round the body; do not like to turn the ewe when in that condition.

Salt.—We always keep salt before our sheep summer and winter; do not think the use of sulphur beneficial to the health of the sheep, or effective in destroying the ticks. I remember an instance many years ago of a party who fed sulphur and saltpetre to his ewes, and it resulted in his having a lot of weak, watery-bellied lambs. I have fed with marked benefit dry sulphate of iron mixed with salt in proportion of 1 lb. of the former to 15 lbs. of the latter, particularly in the fall and spring.

Bruce Co., Ont.

HENRY ARKELL.

A Question for Cattlemen to Discuss.

To the Editor FARMER'S ADVOCATE:

SIR,—For some time past you have been putting certain questions to readers who are, or should be, from their success in their different lines, well able to answer them. This appears to me to be a practical way of obtaining the views of practical men. I will, with your permission, put a question to the many breeders and feeders of cattle who are readers of your paper. The question is, "What does handling indicate?" It has been, I believe, generally thought that a beast that handled well was an easy feeder; in other words, a good handler made more gain from a given amount of food than a poor handler did. Good handling, therefore, meant a good deal, for it indicated in that case cheaply produced beef. I have before me an old diagram of a Shorthorn steer with a scale of points in which the largest number of points given for any one qualification is for handling. Those who got out this diagram and scale of points were evidently of the opinion that the skin was an indication of an easy feeder, and in giving it the largest number of points showed that they believed in reducing to a minimum the cost of production, the most important point in a beef animal.

Professor Curtiss, of the Iowa Agricultural College, in a paper read before the Iowa Improved Stock Breeders' Association, makes the following statement: "There is not a very great difference in the rate of gain or in the number of pounds of increase in weight for a given amount of feed that will be made by a representative of the best beef breeds and a genuine scrub, a Jersey, or a Holstein steer. This is a fact that practical breeders and improvers were slow to accept at first. In fact, they did not accept it until it was repeatedly demonstrated, and some will not concede it yet; but the evidence is constantly accumulating, and it is useless to ignore facts. This is governed by the digestive and assimilative machinery of the steer." Here Professor Curtiss is referring to the different breeds, not to individual animals; but in scrubs and dairy cattle we do not look for the soft, mellow skin and mossy hair in the same way that we expect to find it in the choice beef breeds. A dairyman wants his cattle to have good skins and hair, but the "feel" of them is different from the mossy coat of the ideal beef beast. This being the case, good handling would not appear to indicate a very great saving of feed. In the same paper Professor Curtiss gives the score card used by the students at the Iowa Agricultural College in judging cattle. Out of a hundred points, ten are allowed for "quality," described as "thick covering of firm flesh; mellow touch; soft, heavy coat; fine bone; velvet-like skin." For two other qualifications only are ten points allowed, namely,

"form under the fessor C most in his paper Fundam Beef Cat quality, an impo beef cat found in should thick an indic gestic p must be will pro breeds d mossy h which I paper s the auth thousand other qu ing that was the thus dif I think, ject by scribe fo to decid handling think it sider it r

About a few no darkest prizes to ing wor have be these w Canada. the buto matter c unique o ago the a Carcas the sam Scottish end grea best br Carcass conclusi excellen breeds t the car borated competi been th champion Birming horn cr of Whi the last tenham of show this bul and his gramme greater by a wh Mr. Pa cross a cess. C the Gal success carcass loway s lead to crossing pure-br and an class, is Gallow Smith in two The first Gallow thought lbs. at right g kills w come a card th Queen, reserve much 1,700 lb that so in the have sl loss, in ready this bu with a but th value t not be Two ture h view, (Univer of tele

"form and back." As fineness of bone comes under the head of quality, it would seem that Professor Curtis would place "handling" as the third most important point in a beef beast. Again, in his paper, which, by the way, is entitled "The Fundamental Points of Practical Excellence in Beef Cattle," the Professor says "there is a certain quality, character, style, and finish that constitutes an important factor in determining the value of beef cattle. One of the first indications of this is found in the skin and coat. A good feeding animal should have a soft, mellow touch, and a fine but thick and heavy coat. A harsh, unyielding skin is an indication of a sluggish circulation and low digestive powers." Surely, if this is the case there must be but few scrubs, Jerseys or Holsteins that will produce a pound of beef as cheaply as the beef breeds do which are bred with the mellow skin and mossy hair in view. In the old scale of points which I have spoken of, and which I copied from a paper some years ago and did not note who was the authority for it, the total number of points is a thousand. Forty are allowed for handling, no other qualification getting more than thirty, showing that the author of it thought that handling was the most important point in a beef animal, thus differing somewhat from Professor Curtis. I think, Mr. Editor, that a discussion on this subject by some of the practical cattlemen who subscribe for your paper would be a benefit and tend to decide just how much should be allowed for handling in judging cattle, for while most judges think it an important point, I think some men consider it much more important than others.

"CLAUGHBANE."

Our Scottish Letter.

About a month has passed since last we penned a few notes for the FARMER'S ADVOCATE, and that darkest month of the year has been fruitful of surprises to the agricultural, or, rather, the stock-breeding world in Scotland. The great fat stock shows have been held, but mere prize-winning details of these would not be of much interest to readers in Canada. The position of the breeds, as tested by the butchers and show judges after all is over, is a matter of much wider concern, and therein lies the unique character of the season of 1897. Two years ago the Smithfield Club inaugurated what is called a Carcass Competition (on your side of the Atlantic the same thing is known as the Block Test), and Scottish breeders expected that this would in the end greatly modify current opinions regarding the best breeds for producing beef and mutton. The Carcass Competition, in fact, has been the most conclusive demonstration ever witnessed of the excellence as beef cattle of the slowly-maturing breeds of Scotland and Wales, and the honors of the carcass awards have been curiously corroborated by the awards of the judges in the live competition, and *vice versa*. The year 1897 has been the year of the Galloway supremacy. The champion of all the three great shows at Norwich, Birmingham, and London was a Galloway-Short-horn cross bullock, bred by Mr. W. Parkin-Moore, of Whitehall, Mealsgate, Cumberland, and fed for the last twelve months by Mr. John Wortley, Frettenham, Norwich, one of the most successful feeders of show cattle in Norfolk. The cross in the case of this bullock is unusual. His sire is the Galloway and his dam the Shorthorn. The ordinary programme is the other way about, and no cattle are in greater favor with feeders than the blue-greys, got by a white Shorthorn bull from the Galloway cow. Mr. Parkin-Moore resolved to give the unusual cross a fair trial, and he has had unexpected success. Curiously enough another great supporter of the Galloway—the Duke of Buccleuch—had equal success in the carcass competition, the first prize carcass there being that of a bullock got by a Galloway sire from a Shorthorn cow. This is likely to lead to an increased demand for the Galloway as a crossing bull, and the fact that the carcass of a pure-bred Galloway was second in the same class, and another of the same was first in the younger class, is not likely to retard this consummation. Galloway men naturally feel uplifted, and the Smithfield block test has done more for the breed in two years than the summer shows did in twenty. The first bullock sold at the show was the champion Galloway, and his price was £80. This, it may be thought, was dear beef, for his weight was but 1,730 lbs. at two years and seven months old. This is a right good bullock, and we expect to hear that he kills well. The Aberdeen-Angus men, as usual, come out well at the fat stock shows, their best card this year being Lord Rosebery's Scottish Queen, which was champion at Edinburgh and reserve champion at London. She has not matured much more quickly than the Galloway, weighing 1,760 lbs. at 2 years 8 months 4 weeks. This shows that something can be done with the Galloway, even in the matter of early maturity. The recent shows have shown that there is no profit at all, but much loss, in keeping cattle over for a year after they are ready for the butcher. Nobody, of course, does this but an enthusiast who wishes to win a prize with a specially good beast in the following year, but the experience of the enthusiast is of good value to the ordinary feeder, as it shows what cannot be done profitably in everyday farming.

Two Scottish professors or teachers of agriculture have lately bulked somewhat largely in public view. One is Professor Cossar Ewart, of Edinburgh University, who has done splendid work in the paths of telegony. His great aim is to prove or disprove

the truth of the theory that the first impregnation influences the subsequent progeny. He has taken an original method of finding this out. After many disappointments he succeeded in securing a Burchell Zebra male, and endeavored time and again to get him to serve a mare of any horse breed. Having all the traits which distinguish the wild animal, it was very difficult to get him to work at all, and he would not look at a mare, no matter how keenly she might be in season, if anyone were looking on. For two seasons the Professor failed to get a single animal in foal to the Zebra; but in 1895 a Rum pony mare, which he has named Mulatto, was served, and in 1896 she produced a lovely foal by the Zebra, beautifully striped, but, curiously enough, not with the stripes of his sire, but with the stripes of the Somaliland Zebra, which is supposed to be the original of the species. In 1896 Mulatto was served by an Arab stallion, and this year she has produced a foal having unmistakable stripes on the withers and legs, and so far apparently confirming the doctrine of telegony. Professor Cossar Ewart is not satisfied. He wants to know why the produce of the Zebra and Mulatto is striped not like his sire but like the Somaliland Zebra, and now that he and his men understand the ways of the Burchell Zebra better, they have been able to get this season four foals after him. One is out of a skewbald mare, another has for dam an Irish hunting mare, a third is from a Scottish draft mare, mostly Clydesdale, and the fourth is from a Shetland pony mare. All four, except the filly out of the draft mare, are striped like the Somaliland Zebra; she is striped on the legs and thighs, but bears more resemblance to the horse genus than the other three. Her dam has again been mated with the Zebra, but the dams of all the other three have been put to horses, so that telegony will have a fair and fuller trial, should all safely foal. If they should, and the produce again be striped as the foal out of Mulatto this year was, the question will be renewed with intensity. Is this telegony or atavism? And if the latter, why should the breeding back in the matter of color be coincident with the use of a Burchell Zebra sire? It will be apparent from this scanty outline of his work that Professor Cossar Ewart has embarked on a most fruitful inquiry in which much may be learned of benefit to the stock-breeder. In America his experimental work would be subsidized by Government, but in Scotland we are a frugal people, and the enthusiast has to pay for his enthusiasm. Other problems in breeding are engaging the Professor's attention, especially the serious question of abortion in mares—its causes and prevention. He has published the results of his investigations so far in a booklet entitled "A Crucial Stage in the Development of the Horse," in which many interesting facts are revealed relative to the embryo of the foal and its liability to escape from the uterus at certain stages and under certain conditions. The work on which Professor Cossar Ewart is engaged ought to be sympathetically regarded by all lovers of animals, and on the lowest plane of self-interest by breeders of every class of stock.

The other original investigator whose work seems likely to produce good results is Mr. I. R. Campbell, B. Sc., for five years assistant to the Professor of Agriculture in the Glasgow Technical College, and now Lecturer on Agriculture in the Harris Institute, Preston. Mr. Campbell has devoted himself very largely to problems in dairying and the improvement of the usual make of Scotch Cheddar cheese. He has also done much investigation work regarding the effect of nitrate of soda on hay and the manuring of the turnip crop. In recognition of his services, he was during the past week made the recipient of a handsome testimonial, and was entertained to a public banquet in Glasgow. The exact nature of Mr. Campbell's labors in the dairy department will only be known when his report appears in the "Transactions" of the Highland and Agricultural Society for this year. He will also give some account of his work in the report of the Cheese Discoloration Committee, which will be published in February. This committee, thanks mainly to your countryman, Mr. R. J. Drummond, Ingersoll, Ont., the head of the Scottish Dairy Institute at Kilmarnock, and one of the "smartest" men we know, is acknowledged to have done splendid service, and to have been the means of vastly improving Scottish Cheddars, which two years ago were badly discolored. This year, on the other hand, the judges at the principal cheese show in Scotland emphatically declared that an immense improvement had taken place, and a discolored cheese had scarcely been found in the show. All this is work which in Canada the Government would have seen to. Here a private fund was collected, amounting to about £100, and with that the experiments were entered on. The method adopted for the cure of unequally distributed coloring was the use of a starter, and in the hands of careful makers this has proved highly advantageous. Some makers, however, do not seem to have understood this, and they have produced the results which inevitably follow the use of good tools by unskilled workmen. The agricultural outlook is generally much more favorable this year than it has been for some time past, and if industrial warfare would only cease, a period of good trade might be looked for.

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

The Tuberculosis Scare.

To the Editor FARMER'S ADVOCATE:

SIR,—Just starting for a three weeks' trip to the West leaves me but a few minutes to pen some words endorsing every line Dr. Sankey has written. Had I the time I would have entered more freely into the subject, as you know I have so often expressed my views entirely on the lines that the Doctor has taken in my crude way. The tail was being allowed to wag the dog instead of the dog wagging the tail. In other words, while the crusade was being waged upon the poor animal, the walking danger, the tuberculosis-affected individual, man, was stalking abroad unnoticed and unmolested. I have no time to enter into the subject fully, but I could not refrain sending these hurried lines to congratulate you upon getting such a lucid expression from one whom all must acknowledge as an authority upon his subject, as well as to congratulate him upon his moderate views as expressed by his lucid article. It is the best, clearest, fairest and most valuable brochure yet issued by either English, Canadian or American experts, and its great value to the farming community is that it is written from the standpoint of a professor who takes no narrow view of the trouble.

A word more: Let us urge upon all who have the interest of our live stock at heart, and the interest of breeders thereof, to drop this scare. Why should the breeders of what is one of the greatest assets of our Province pander to this unwholesome panic and do their best to prevent the consumption of both beef and milk by encouraging amateur cow testing with tuberculin and discussions upon the subject at Farmers' Institute meetings and at the annual meetings of the Live Stock Breeders' Associations, by this means keeping the subject before the people? Let it alone and it will die a natural death. It is more of a veterinarian's disease than a cattle disease.

RICHARD GIBSON.

FARM.

Institute Work in Maritime Provinces.

The farmers of New Brunswick are somewhat in advance of those in Prince Edward Island or Nova Scotia in the matter of Farmers' Institutes. The Local Government of New Brunswick, in concert with the Farmers' and Dairymen's Associations of the Province, have arranged for a series of Institute meetings in every county in the Province during the months of January and February. Not all of the dates are yet announced, but it is expected to cover the whole country. The speakers at these meetings will be Wm. C. H. LaBellois, Com. of Agriculture; D. McCrae, of Guelph, Ont., upon Cattle Feeding and Tuberculosis; J. S. Armstrong, C. E., Sec'y of N. B. Good Roads Association, upon "Good Roads," with lantern slide illustrations; W. Saxby Blair, Horticulturist Maritime Experimental Farm, upon Planting and Management of Orchards and Fruit Gardens; W. W. Hubbard, upon Dairy Cattle, illustrated by lantern slide illustrations of famous cows. Several other speakers of note are being engaged. These meetings will form the nucleus of Institute work in the Maritime Provinces. It is time for the other two Provinces, Nova Scotia and Prince Edward Island, to look to their laurels. New Brunswick has got ahead of them in this matter of Institutes. Nova Scotia may be moving and will probably, if not this winter, certainly next; but Prince Edward Island has done nothing thus far, nor is there any immediate hope that she will. The Professor of Agriculture of the Provincial College began a series of Institute meetings in January, 1894, which, considering that he had no assistance, was fairly successful, and had Prof. Harcourt remained and been given a free hand, Prince Edward Island would now be reached even unto the remotest corners. The Local Government of the day thought the teaching of agriculture in the Normal School and by Institute meetings superfluous, and now P. E. I. has neither agriculture taught theoretically nor Institute meetings. Strange indeed when you come to consider that 85 per cent. of the population of the Island live on the farms and are supported by the fruits of the Island red clay! Thousands of dollars are spent by our Government in teaching the youth of the Province the elements of Latin, Greek, French, etc., and practically nothing is spent for the teaching of the elements of agriculture, and as the result, as might naturally be expected, we have an overabundance of lawyers, doctors, school teachers, and scarcely any skilled farmers or artisans. This goes to show, too, that if the youth of the country had the same opportunities to follow agricultural and technical pursuits as they have to follow professional, their numbers would not be less; for they do not lack the attribute of taking advantage of the opportunities offered them.

J. A. MACDONALD.

King's Co., P. E. I.

Barn Building.

BY D. A. HEWITT.

Sooner or later nearly everyone builds a barn, and it causes either pleasure or annoyance in proportion as they see fit to make it. To those who go about it knowing what they want there is a pleasure in seeing their buildings rise from raw materials and take their place amongst the features of the landscape. To those who cannot tell how it will look or whether they will like it or not, building operations are likely to prove expensive, if not unsatisfactory. The intelligent layout of the floors is of vastly more importance than any other part, and the arrangement of the several parts with reference to the site and ease of communications is successful in proportion to the degree in which convenience and comfort are exemplified. The purpose of this article is merely to point out some of the details of construction and conveniences of arrangement that are applicable in an up-to-date barn, and to compare the relative difference in handling of the farm products in buildings of each plan. In case you want to sell, if the property does not sell for more it will sell more readily than if the buildings were built without careful thought. The farmer cannot build economically or in good taste without a well-arranged plan on paper first, if he wishes to build well and cheaply.

We wish to call attention to the fact that a handsome barn can be built as cheaply as a deformed or repulsive one, as the real beauty lies alone in its proportions. It may be rude, yet shapely; plain, yet attractive.

Drainage.—Along one side of the barn a six-inch tile or sewer can be located. The waste water from cistern, tank or eaves may be gathered by a four-inch vitrified tile and discharged into a larger sized pipe. Weeping or agricultural tiles, covered with broken brick and stone rubbish or coarse gravel, placed under the cement floor or on exterior of the bank side of the building, will materially aid in removing the surface water and can be leached into a cesspool or barrel filled with large stones.

Windows.—The windows in the basement to have a 2½-inch jamb and 2½-inch rebated sills, with ½ inch by 1 inch iron water bar for sash to close against; 1½-inch white pine sash. These may be in three sections, the center one screwed solid with the two side sash rebated to same. Sashes may be hinged at the top and provided with hooks to hold them in place when opened upwards. Sashes can be swung on side pivots or spring catches, admitting of the easy removal of sashes from the opening if desired. If the pivots are placed below the center line of sash its weight will swing it inwards and keep it there.

Root Cellar.—The inside of root cellar against stone walls should be slatted perpendicularly, commencing say two feet from floor level to ceiling line, with 1½ x 4 inch slats at 6 inch centers. A double-sided wooden partition constructed in the above manner if placed in the center of root cellar will ventilate the pile. Sometimes the dividing line between stable and root house is double boarded and within two feet of the ceiling, the remaining space filled with slats three inches or less apart so that the upper temperature may be alike in both places.

Watering Troughs.—There are several contrivances for the easy watering of animals: The open troughs, six inches wide by three inches deep by the length of the stalls, placed in front of the mangers. A deeper and wider trough is sometimes concealed under the sloping outer portion of the riser to the manger, with a small trapdoor for each pair of animals opening over the water. Cast iron troughs or small sinks placed on a line of 1½-inch pipe, which brings the water to the corner of the stalls or between the animals. Large tubs (made from coal oil barrels) are often put in box stalls and inside the entrance way of horse stables, and supplied from an overhead pipe by turning the valve. A wooden watering trough on south side of the barn in barnyard is also very necessary for the stock.

Waterworks.—Water may be forced to the buildings by hydraulic rams to tanks placed in one of the mows above cellar, or by the windmill power. The supply of water is regulated by a copper ball or float. Iron water mains are laid the full length of the barn (with lesser sized pipes to every row of stalls) from the tank either on the ceiling or beneath the concrete floor.

Size to Acreage.—Some reader may ask if there is any guide that the average hundred-acre farmer

may be governed by in building, as to the size of the structure he would require to properly house his stock, implements and products. The dimensions might vary somewhat according to the productiveness of the soil and the crops grown therefrom. The barn with two side drive floors of 46 x 70 x 16 feet to plate and one 48 to 54 wide by 72 feet long by 18 feet post for an end drive are fair-sized buildings for 100 acres of land. For 200 acres a structure 54 feet wide by 100 feet long by 18 feet post, with the drive floors located with entrances either from the side or end, are suitable dimensions.

The Single Drive Barn with One Long Mow.—A new form of using the single drive floor barn is by making a 20-foot mow at one end and a 30-foot mow at the other, the last 10 feet of the latter being used as a hay mow, to which full access from below is gained through a shaft 3 feet by 2 feet 6 inches, with steps perforated through the sides from bottom to top, and three vertical trapdoors, one at the bottom and one 8 feet from the top, with a third door midway distant between them. They

tilation by windows: the center section is fixed solid, with the two side sashes rebated into the sides of center sash, hinged to window frame and secured to the middle division. Frames made with diagonal sloping boards, with open spaces between, when placed near the ceiling on outside walls, allow the foul odors to escape and prevent the rain or storm from beating in upon the animals. A close-fitting board door, hinged to open inwards against the ceiling, effectually closes the vent. Ventilation by ducts or boxes from stables to louvers in roof space, used in combination as hay or straw chutes. Boxed ducts on side walls, connecting with a pair of rafters which are sheathed on the underside and connected with roof ventilators.

Floors.—In the cattle department they should be of concrete. Grade the full width of basement with a 6 inch fall to the barnyard side. Manure gutters should be formed with a slope 8 inches high against stall face, by a width of 30 inches. The passageway should be 3 inches lower than the stall floors, to show off the stock when selling or exhibiting to better advantage. In the horse stables use pine floors with graded counterfloors in stalls. Clay with a mixture of sand is most acceptable for box-stall floors, but it is much harder to preserve cleanliness than when a cement floor is put in. The threshing floor should be made of 2 inch plank, mill worked, sound and dry, tongued and grooved, driven well together and nailed to each joist or bearing. The granary floor and ceiling over it to be of inch material, matched pine, making the former a taut plane on which to deposit grain, while the floor above prevents the dust from leaking through into the bins. The mows are better when floored with close-fitting rough boards, with their joints concealed by thin battens (provided grooved and tongued material is not easily obtained), so that the animals can be seen at any time without the prevalence of hayseeds on their coats. Some farmers imagine that cattle require little or no care, but from the experience of the most successful cattle breeders it is proved that comfortable and conveniently arranged stables, pure air and wholesome food are essential to successful stock-raising.

Ventilators.—Doors placed on sides of the barn at mow floor and beneath plate level are useful to open for air and light during the threshing time. Combination ventilators are often placed over the horse stable, extending to the roof and capped with a louver. These are used as hay chutes, with a series of doors arranged at different heights with proper attachment to open, shut and hold in place. A ladder is placed on the inside to climb to the hay loft.

Doors.—Large drive doors should be placed in horse stable so that in stormy weather a team could be harnessed or unhitched inside. In the four foot stable door when made in one length a small wicket door is placed, a suitable height and size for a man to pass. The space into the center of cattle stable should be accessible through double doors to a roadway opposite root cellar, left so that a team could receive a load of roots or straw with one handling of the stuff.

Shelters.—The recessing of the south wall from six to ten feet inwards affords an excellent shelter for the cattle against the driving storms of winter or rainy weather of the spring and fall seasons. In "threshing out" the straw stack can be placed almost against the rear wall of the barn, still giving freedom for passage to and fro of the stock below. If less shelter room is required and more stable room, then continue the horse and cattle stalls at the extreme ends to the full width of the structure, and leaving a shelter in the center portion of barn, about half the length of wall.

In arranging the interior it is preferable to have the horse stable on the end of basement nearest to the dwelling. In case of sickness or a horse getting untied during the night someone is almost sure to be aroused and the life of a valuable animal is often saved. Between the different stables a cross wall of brick or stone should be run to ceiling line, with a door connecting the two departments.

Horse Stalls.—Horse stalls vary in length from eight feet six inches to nine feet, ending in a six inch turned or a six by six inch square post with chamfered edges. The two-inch divisions between stalls look neater with a two by four inch capping. When the capping is omitted then bind the upper edge, top of manger and feed box with two inch hoop iron well nailed on.

Horse Mangers.—The covers on feed passage

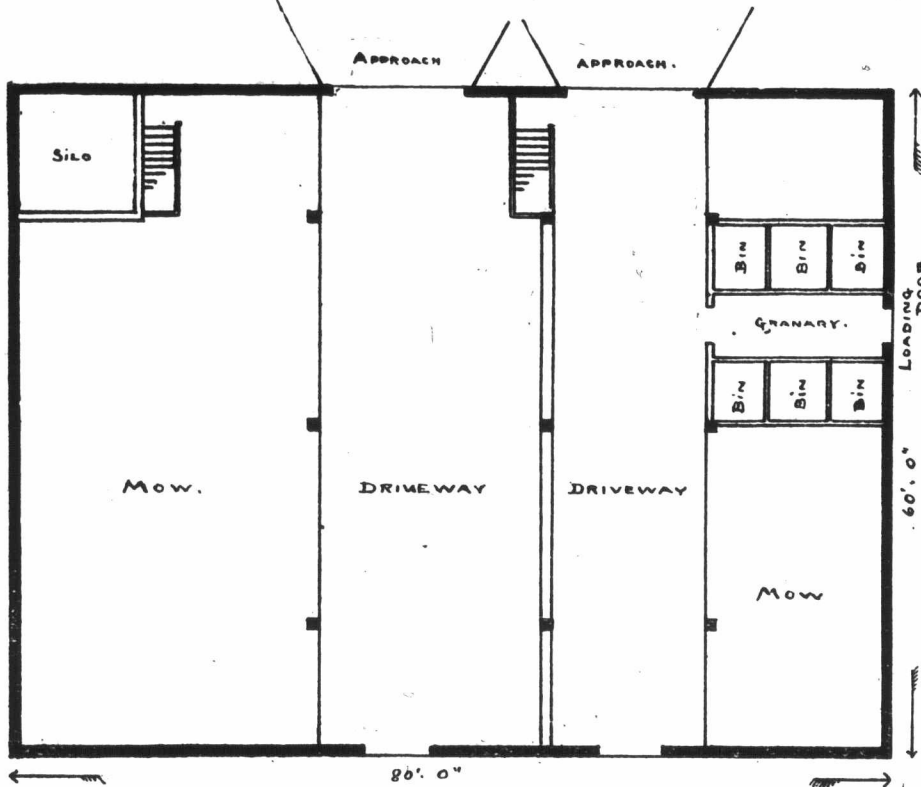


FIG. A. — BARN FLOOR PLAN — SIDE DRIVE.

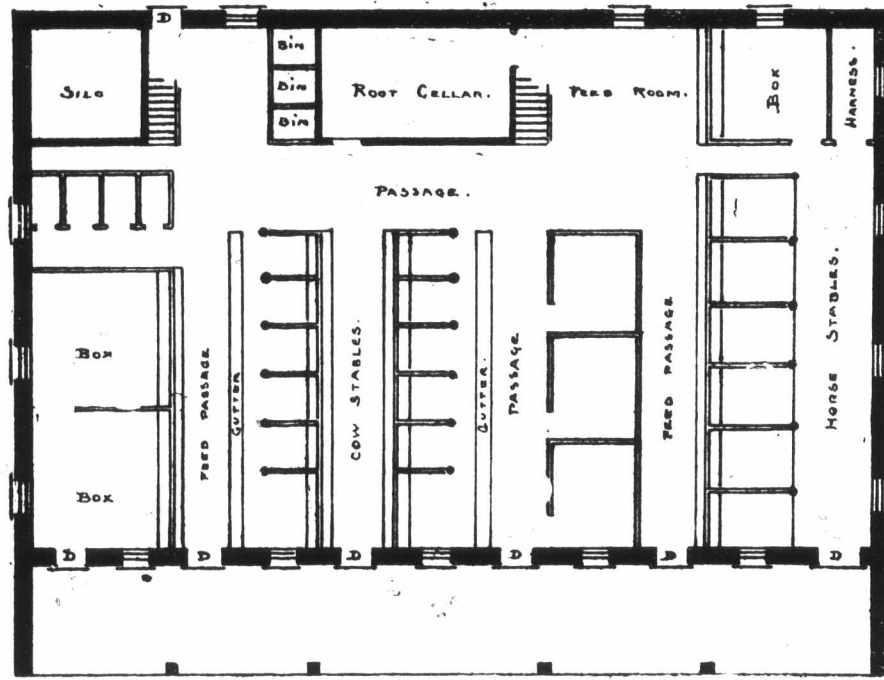


FIG. A. — BASEMENT PLAN.

are used for throwing down hay, according as the quantity in the mow is diminished.

End Drive Barn.—Superiority of the end drive barns over those entering from the side: (1) Simplicity in feeding; the driveway can be traversed with all classes of feed, which can be dropped into a chute at any desired point near center of barn; (2) two men with a rack-lifter can fill a barn of this description; (3) two exits, with the two long sides given for light into stables and for access into barnyard. This is not a bank barn in any sense, but stands on level ground, having 10 to 12 foot walls of masonry, with free air from all sides. For convenience of reference and conciseness of arrangement, we will confine ourselves to the stone foundations first and deal with the framework and layout of the upper part of the barn later.

Ventilation.—A frame is made in outside walls above the stable door 12 x 12 inches. Against this opening a box 10 inches deep by 20 inches wide and 6 feet high is used to conduct the air to ceiling level. The air is controlled by a hinged lid. Ven-

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side of mangers are often in individual sections with smaller lids to feed boxes. Some like a cover extending over the width of three stalls, as one handling answers.

Cattle Stalls.—The most perfect arrangement for stabling cows is a box stall with a shallow gutter near the middle. Box stalls can be used advantageously only when there is plenty of bedding. When sufficient straw is used they can be left for several days without cleaning, but on the score of economy most farmers prefer to tie up in stalls. Different lengths of platform should be made to suit the various ages and sizes of cattle. The average length of woodwork in stalls runs four feet six inches by a width of not less than thirteen feet and up to fourteen feet for two pairs of animals. Stall boards look more finished when terminated by a six inch diameter post of oak finished with a turned ball. The gutters should be eight inches deep against stalls, made in the form of a grade, say thirty inches across, with the level of passage-way behind three inches below the platform of the stalls. The tops of divisions between boxes and heads of stalls in cattle stables are now being made four feet high, allowing free circulation of air and diffusion of light, and all animals are in view from any part of the basement.

Chutes.—A number of chutes should be placed to open from drive floors into root house, feed room and stables on the ground floor, for the passage of hay and straw from the mows above.

Ladders.—Ladders should be conveniently situated from main driveways. On barn ends a ladder commencing 6 feet from floor of mow or roof of granary, and reaching to the gables, can be placed to be used in adjusting the hay-fork car.

Brush Boxes.—Frames 2 feet 6 inches long by 1 foot 8 inches high by 12 inches deep, of 2-inch plank, built into the walls of basement at convenient points, are a source of comfort to the users of curry combs and brushes; and a suitable receptacle for the milk pails in the cow stables.

[NOTE.—The above article and plans have been prepared by Mr. D. A. Hewitt, architect, formerly of Brantford, Ont., now of Ottawa, who has given much attention to the subject of farm barns and construction, and are offered as specimens of his work. The plans are of course subject to changes and modification to meet circumstances. In the case of plan A, for instance, the shelter may be dispensed with, which will give room for considerable addition to the stable accommodation. The location of the feed room may also be changed so as to be between the silo and the root house for convenience in mixing feed. The silo might, in order to increase the stable room, be placed outside the building, as many are now arranged, having handy connection with the feed room by a door and a chute down which the silage is carried.—EDITOR.]

Favors Windmill Power.

To the Editor FARMER'S ADVOCATE:

SIR,—I will try and show my fellow-farmers some of the advantages of the windmill over other farm powers. I have a Brantford 14-foot windmill, which was erected on my farm two years ago. All I have to do when the horses are feeding or on a stormy day is to go into the barn and pull on the lever and it is either grinding with the large Maple Leaf grinder (I have ground oats at the rate of sixty bushels an hour) or cutting chaff as fast as I have done with eight horses, or pulping turnips, or pumping water—rain or shine, as long as there is a little wind. All the expense I have now is a little oil. One of the great advantages of the windmill over the other powers is that it is always ready and always out of the road. A. E. HODGERT. Perth Co., Ont.

Three Great Pictures.

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

Treatment of Seed Oats to Destroy Smut.

To the Editor FARMER'S ADVOCATE:

SIR,—In common with nearly all farmers, I have suffered considerable loss from smut in oats. Some years I believe it is as much as 20 per cent. This is a loss without any compensation. I have watched the agricultural press for some time for some antidote or some method to prevent the oats turning to smut. As yet I have noticed but two methods that have been recommended. The one I may call the hot water cure. This, however, is so inconvenient that it is not practiced to any extent. The other was extensively published in the agricultural press some years ago, and if I remember rightly was said to have been discovered in Russia. It consisted in saturating the oats in a solution of potassium sulphide, or liver of sulphur, to give it its common name. One pound of this was to be dissolved in about six gallons of water. It was said this would destroy the smut spores without injuring the vitality of the grain. Last spring I prepared a solution of the above in my spraying barrel. I then spread my seed oats on the barn floor and thoroughly sprayed them, turning them several times and spraying them each time until they would retain no more of the solution. I did this in the evening, the next morning the oats were dry enough to run through the drill. I found that the vitality of the oats was not injured in the least. I also found at harvest that the vitality of the smut spores had not been injured in the least. This is my experience with the potassium sulphide "cure." As perhaps I did not apply this "cure"

Manitoba's Final Crop Report for 1897.

In our last issue was given an estimate of the products of the farms of Manitoba for the year 1897. The December crop report has since been issued, and a few more details will be of interest. By districts the acreage, average, and total yields of wheat and oats are as follows:

WHEAT.			
District.	Area in Crop.	Average Yield.	Total Yield.
North-western	90,000 acres.	16.5 bus.	1,485,000 bus.
South-western	554,626 "	13.6 "	7,542,913 "
North Central	240,181 "	14.7 "	3,530,650 "
South Central	320,000 "	13.0 "	4,160,000 "
Eastern	86,075 "	15.7 "	1,351,377 "
Province	1,290,882 "	14.14 "	18,261,950 "

OATS.			
District.	Area in Crop.	Average Yield.	Total Yield.
North-western	68,910 acres.	29 bus.	1,999,290 bus.
South-western	163,925 "	19 "	3,115,575 "
North Central	73,636 "	23 "	1,694,628 "
South Central	105,100 "	23.5 "	2,469,850 "
Eastern	50,525 "	21.5 "	1,087,283 "
Province	468,141 "	22.7 "	10,629,513 "

In barley the total area in crop, 153,266, with an average yield of 20.77, giving a total of 3,183,002 bushels.

The total yield of flax is given at..... 247,536 bush.
 " " rye " 48,344 "
 " " peas " 33,390 "

Making the total grain crop 32,404,625 bushels. The report continues: "The range of yield, as reported by correspondents, varies from six to twenty-two bushels per acre. The season for harvesting and threshing was exceedingly favorable, and never in the history of the Province was the wheat crop placed at such an early date upon the markets. The quality was in general No. 1 or 2 hard, free from smut, and the price realized was in excess of that received for some years past. Although the yield on the whole was only 14.14 bushels per acre, the crop was handled expeditiously and economically, and the price realized has been so satisfactory to farmers that the Province has forged ahead, entering upon a new era of prosperity."

"The oat crop this season cannot be considered much better than half a crop."

LIVE STOCK.

Beef cattle exported..... 15,000
 Stockers exported to U. S..... 16,500
 Total..... 31,500
 Hogs shipped out on foot or dressed 12,500
 Hogs received by Winnipeg packers 25,000
 Total..... 37,500

Although the above large number of stockers and export cattle have been sent out, still the total number of cattle in the Province shows an increase over the estimate of 1896, viz.:

STOCK IN THE PROVINCE.

	1896.	1897.
Number of horses in Prov-		
inco.....	95,140	100,274
" cattle.....	210,507	221,775
" sheep.....	33,813	36,680
" pigs.....	72,562	74,944

The poultry disposed of by farmers is given as:

Turkeys..... 47,540
 Geese and ducks..... 20,000
 Chickens..... 184,055

which does not begin to supply the local demand. Large quantities of turkeys and geese are yet imported from Ontario to supply the Christmas markets.

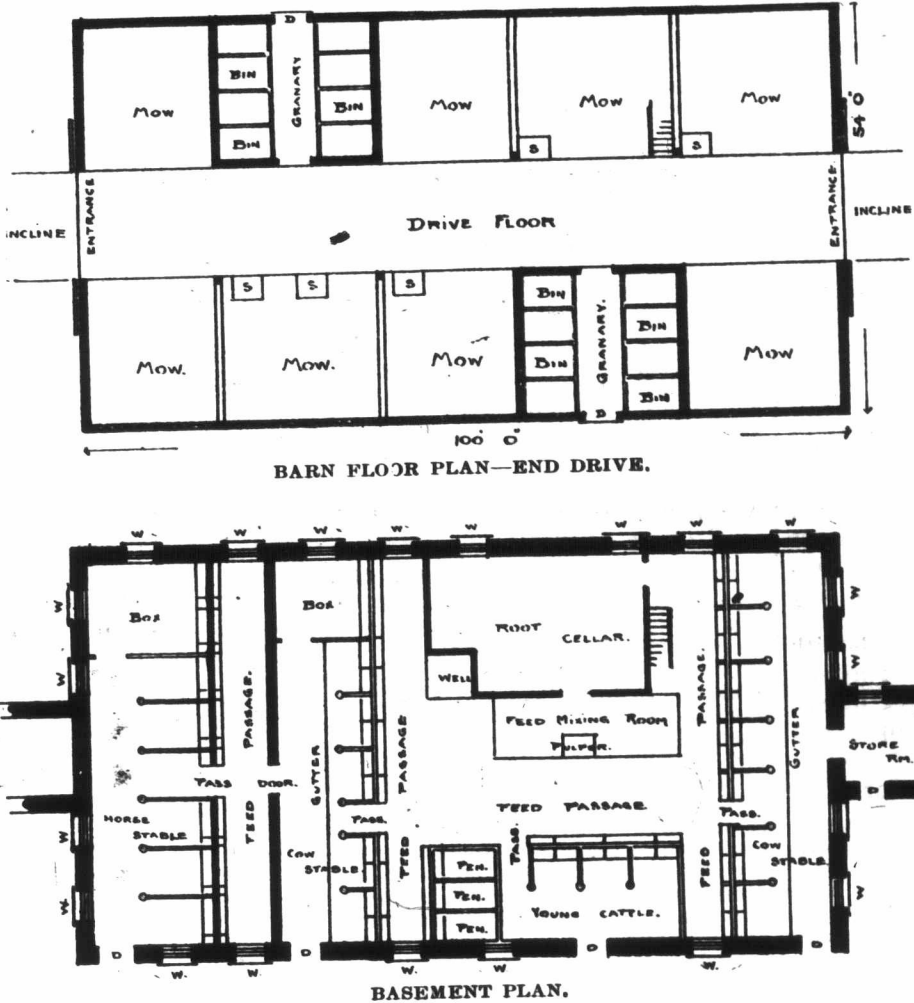
In dairy products the increase in production over 1896 is unfortunately very small, but owing to the higher prices ruling this last year, the returns financially have been greater. The following figures are from the crop reports of '96 and '97:

	Pounds.		Price.	Value.
Butter (Creamery.....)	1896.	1897.	18c.	\$177,692 22
Dairy.....	1,469,025	1,410,285	13c.	188,625 62
	2,245,025	2,397,464		366,317 84
		Pounds.		Price. Value.
1896.	1897.	1897.	1897.	
Cheese.....	986,000	987,007	8 1/2c.	83,895 59

Fall Plowing.—The total area of fall plowing is 888,935 acres. From the August Bulletin the area of breaking is reported as 88,790 acres, and the summer-fallowing as 392,900 acres, making a grand total of 1,370,685 acres prepared for the crop of 1898, an increase of more than 400,000 acres over that ready a year ago for the 1897 crop.

The estimated expenditure for farm buildings totals nearly \$1,000,000.

Prairie Fires.—The loss estimated from this source does not, after all, begin to approximate the actual damage sustained in the setback it gives to the sufferers, which we find to be for the past three years as follows:



in the right way, I would like to have the experience of others, as doubtless there are many who have tried it.

JOSEPH CHELLEW.

Lincoln Co., Ont.
 [NOTE.—Mr. S. A. Bedford, Supt. Experimental Farm, Brandon, Man., in his report for 1896 says that in his experiments with sulphide of potassium the seed oats were soaked in the solution for twenty-four hours—1 1/2 pounds of the chemical to 25 gallons of water—and very little smut was seen. Next to this treatment the steeping of oats for five minutes in bluestone liquid generally gave best results, and this may be sufficient to keep the smut in check even if it does not completely destroy the smut spores. Mr. McKay, Supt. Exp. Farm, Indian Head, N.-W. T., in his 1897 report, gives results of bluestone treatment for smut in wheat. Pure seed.—1 lb. bluestone to 8 bush. Heads on 25 square feet: good, 1,342; smutty, 0. Untreated—1,014 good; 244 smutty. Smutty seed—1 lb. bluestone to 8 bush.: good, 1,210; smutty, 21. Untreated—good, 641; smutty, 643.—ED]

Second to None.

JOHN MOORHOUSE, Renfrew Co., Ont.:—I have to congratulate you for the pains you have taken to give the farmers such insight of what is going on in the world for their benefit. I consider your journal second to none published in the country today. When it reaches our house it is for who will have it first. The girls are just as anxious as the boys. I hope you may be long spared as the farmer's advocate. Now, sir, I wish you and your many readers a happy New Year!

1895.....	\$128,840
1896.....	50,000
1897.....	137,925

The tenor of the general remarks made by the various correspondents throughout the Province bespeaks in a most unanimous way the general feeling of prosperity and hopefulness that prevails. The following extracts may be taken as a general index: "Prices are good, farmers are paying off their debts. Cattle and horses are in good order. Plowing well ahead."

"The country was never better financially, and never was outdoor labor so far advanced."

DAIRY.

Winter Dairying Pointers.

When a man is going to build a barn, or undertake any effort upon which he desires further light, if he is wise he will investigate the methods of men in like undertakings, whom he is conscious have made a success of that particular branch upon which he desires information. There are among our readers very many engaged in dairying who are making money, while many others are working industriously without making any financial advance. It is for this latter class especially the following series of suggestive letters are intended, while the interchange of ideas will also be of advantage to those who are succeeding and wish still further to improve upon their methods of cow-keeping.

After one has a herd of good cows, perhaps the next consideration is to supply them with proper food, as it is from this raw material that the salable product is derived. If a cow is to do her best she must be healthy; it is therefore important that proper ventilation be secured. After milk of a good quality has been drawn from a cow, to allow it to become contaminated is to court failure; it is therefore of great importance that the hips, udder and sides of the cow be kept clean. It is claimed for dairying that by it the fertility of the farm can be maintained. This is true only when all the manure is returned to the land. See what advice is given below on stable floors, gutters, absorbents, etc. Dehorning is meeting with general favor where by experience its advantages are realized. The contributors of the following epistles speak from experience. Some lines of summer dairying cannot well be carried on without a supply of ice. Winter is the only time of year in which it can be secured. What some of the contributors have to say on this point should bear fruit.

The points already suggested are fully dealt with in the following letters, which are well worthy of a careful perusal. Our columns are open for discussion upon these letters or suggestions upon any branch of dairying not touched upon.

Experience in Feeding Fodder Corn.

My supply of winter food for dairy cows consists of corn fodder, clover, peas and oats sown together and cut green, carrots and mangels. I have had no experience in feeding ensilage. One important advantage to be gained by having a silo is the much less space required to stow away the corn crop. This fall, after filling over grain mows and scaffolding over barn floors, there was considerable of my corn fodder in the field. It remained there till cold weather set in, then it was hauled to the barns and laid crossways on the floors in layers, placing the butts of one layer one way and the next the opposite way, until the whole was secured from the weather. The variety thus treated was Cloud's Yellow Dent. As it grew from twelve to fourteen feet high, it filled the floor from side to side. It was not tied into bundles, but simply laid in armfuls, which saved the labor of tying. In fact, tying is scarcely an advantage, for by the use of a corn-horse with bars across the legs to serve as a ladder to get up to tie the stooks I find that the fodder will cure in about half the time required if tied into bundles while green before stooking, and by tying in two or three places the top of the stook will run up to a point and effectually prevent rain from getting in. When hauling in, if the distance from the barn is not great, a kind of sloop may be used, and every three or four stooks securely bound together as the load is being made, and if to be put on the top of the bays in the barn, it can be elevated by the use of the horse-fork, rope and pulleys.

Of the varieties of corn grown the past season, Cloud's Yellow Dent proved most satisfactory for cured fodder, and much superior to "White Cap." Compton's Early gave a fair bulk of fodder, but got too ripe for fodder, making it necessary to break off the flinty ears, otherwise the grain would pass through the animals undigested. Angel of Midnight and Salzer's North Dakota gave the lightest crop.

My plan of feeding is to cut the corn fodder one inch long. Peas and oats, half inch; mix them together two to one. The morning feed consists of roots and unthreshed oats. What is left of the straw in the mangers is used for bedding. Watering is done between eleven o'clock and noon. The

stable door opens into a shed which contains the water trough. On cold, stormy days the cattle are let out of the stable two or three at a time, and when they have satisfied their thirst they are returned. On fine days they are allowed to move about in the barnyard for an hour or so. The noon and evening meal consists of cut feed, with the addition of half a bucketful of wheat bran. By this system the cost of threshing and grinding is saved, which amounts to about eighteen bushels per hundred for tolls, etc. I think it would be an advantage to have the water conveyed into the stable, so that the cows could drink whenever they felt inclined. Feeding three times per day is probably more of a habit or custom than a necessity. I have made no comparative experiments in feeding, but with the above rations the milch cows are still giving as much milk as in September.

I think the proper way to admit fresh air is before the animals, and have the foul air escape in the rear. I have drop boards on front of the mangers, which are closed down in cold weather, and left open or partly open, as the temperature may require. To keep the cows clean in winter is considerable of a problem, but I succeed by the use of that arrangement of torture known as the stanchion, which has the feature of cleanliness to recommend it, also convenience. A radical change is contemplated here with something like the following arrangement: Water trough on front of manger, with lid to prevent feed entering, but admitting of being raised by the animal when desiring to drink; Newton cow-tie, or a chain stretched across and sliding on a bar at each side of stall; a clay floor for the front feet to rest on; have the sills of the stalls extend back over the cement gutter within six inches of rear side, and have a wooden grate made by nailing 1½x2 inch hard wood scantling across sills over gutter for hind feet; the voidings of the animals will pass through into the gutter, and may be easily removed from rear daily, as may be convenient.

We endeavor to prevent the escape and loss of liquid by using absorbents in a water-tight gutter, such as cut straw, dry muck or sawdust, if the manure is to be put on clay soil. Cement floors are liable to become too slippery and dangerous, but a good cement gutter fills the bill completely.

I have not dehorned yet, but intend to. Several in the neighborhood are highly pleased with the result in their herds. One man said he would not have the horns on his cows again for \$50. It does not seem to effect the milk yield over two or three milkings.

D. P. L. CAMPBELL.

Prescott Co., Ont.

A Successful Holstein Breeder's Methods--Test of Calamity Jane--Filling the Ice House, etc.

For milk cows I want a succulent ration that is easily digested. For our heavy milkers when fresh on winter feed I feed as follows: 6 a. m.—Ensilage, with bran, oat chop and oil cake; the same at 1 p. m. and 6 p. m. Quantity depends upon the capacity of the cow. Feed roots after milking, then a little hay or straw, so the cow can chew her cud. At 9 a. m., 3 p. m., and 9 p. m. I give a mash of wheat bran, sometimes a little pea meal added (this is scalded an hour or so before being fed), then a little more hay. In other words, I do not load all the feed in a cow's stomach at once, but give her two or three hours to take her breakfast, dinner and supper. This is her natural way when at pasture. I know this is contrary to the practice of some good dairymen. This is my way—look to our records for results.

I aim to water a fresh cow in full milk very often; never give over 25 lbs. of water at one time. Calamity Jane, for instance, when giving over 80 lbs. milk daily drank 200 lbs. water daily, with 40 lbs. more in her mash. It stands to reason they must be kept warm, as it is enough work to warm all this water without heating "all America" (outside). All fresh cows require a great deal of water to assimilate and digest their food and give more milk and better quality. Jane drank 85 lbs. water between 6 a. m. and 10 a. m. and tested 3.8 per cent. fat at 2 p. m., officially tested by Mr. T. C. Rogers. How heavy to feed must depend upon the capacity of the cow. She should be fed enough so as not to take too much out of herself. A cow might milk heavy for a short time by drawing on herself, but if allowed to do so she will take it out of her owner later on. Some figures from a recent official test of Calamity Jane, supervised by Mr. T. C. Rogers, O. A. C., shows it pays to feed a cow of great capacity heavy. We fed 27 lbs. of bran, oat chop, pea meal and oil cake, 36 lbs. ensilage, 30 lbs. mangels, 10 lbs. carrots, 10 lbs. hay, in all costing 31 cents per day. We got 3½ lbs. butter per day, or butter cost 9 cents per lb., or reckoning the skim milk at 20 cents per 100 lbs. butter cost about 4½ cents per lb. We were not trying to see how cheaply we could make butter so much in this test as how much we could make. The cow had been fed very lightly previous to this test for fear of milk fever, and perhaps some of the feed given this week would show later on. Cows that have been milking six to eight months are fed differently, about as follows: Ensilage 20 lbs., with 2 lbs. bran and 2 lbs. oat chop, 10 lbs. roots, and good oat straw morning and night; cornstalks while they last, then hay at noon; that is, now in December and January; earlier, in October and November, feed more hay and roots to keep the cow from

shrinking, as that is the most critical time—changing from summer to winter feeding.

I aim to have the air in the cow stable pleasant to the senses. Ours is an old building and not fixed with the most modern ventilation. I have kept putting windows in the south side until now about one-third is glass. It is not well to keep the stable too warm, so that the dry cows and heifers when they go out fine days to water are not chilled. Fresh cows never go out, and those I desire to keep warmer are blanketed. The chute for the ensilage does double duty, to put the ensilage down and let the foul air out. In runs up to the roof. Other openings for feed are left more or less open, depending upon the weather. Prefer to have fresh air come in from the leeward side through several small openings rather than one large one, but do not allow openings on opposite sides of stables, as that creates a draft.

I have three or four different styles of fastening the cows. Prefer stanchions, and those that swing around so a cow can lick herself. One can't keep a cow clean when tied by a chain. We aim to groom the cows three or four days each week.

My stable has cement floor. We have plenty of straw, which is used for bedding. If not intending to draw the manure to the field, we wheel the manure under a covered shed. There is enough straw in it to absorb all the liquid. Manure from milk cows is so much of it liquid (owing to the great quantity of water they drink, roots, ensilage, etc.) that special pains should be taken to save it well. As regards dehorning cows, we have done a deal of it, and would not have a horn on the place if some judges at the shows would take a common-sense view of it. Cows will herd together like sheep when the horns are off. They bunt some, but can hurt so little that the more timid cows will scarcely make an effort to get out of the way.

I built an ice house, intending to make butter in the summer. So far I have not made butter except in the winter, and though I have a spring house and a large tank in which to put Sunday's milk when sending to the cheese factory, still I fill the ice house, as it is a treat in summer and costs but little. The neighbors like to get a chunk of ice in hot weather to keep their milk over Sundays, and they turn in and help me fill the ice house. A few willing hands one day does the work. Owing to my having a spring I have less need for ice than many, still I want my ice house filled, and so would others if they knew the advantage. My ice house is built on north side of barn, is 10 feet square, 2x4 scantlings for frame, sided inside and out with rough hemlock boards, filled in between with cedar sawdust; mud sills, no floor; roof boards, joints broken. It costs but very little, lumber being \$10 to \$12 per thousand. Any "jack" carpenter can build one. It keeps the ice as good as any, as it is the sawdust that keeps the ice from melting. I have a door in one corner. Short boards are put across inside the doorway as the place is filled up. We cut the ice in cakes as nearly even as possible so they will pack in close and leave but little space between. Some fill space in between cakes with broken ice. I put the ice within a foot of the outside walls and as high as I want, generally about seven feet, then the sawdust is put around it and over it. The sawdust needs to be kept packed down through the summer, else when the ice melts some it will leave holes and let the air in.

Oxford Co., Ont.

GEO. RICE.

Methods of Caring for Dairy Cows at the Nova Scotia Government Farm.

I consider ensilage mixed with cut hay, pulped roots and grain the most satisfactory winter ration. I moisten, mix thoroughly, and feed twice a day wheat bran and crushed oats. If peas could be successfully raised here I think I would prefer them to oats. I take the American standard for a ration and give cows all they will eat. Have water in front of cows all the time and believe it pays well.

Have made no special study of ventilation. We have our barn thoroughly ventilated at the top, but am convinced that there should be some system of receiving fresh air at the ground floor.

Cows stand in rows of individual stalls. The partition between the stalls extends to at cut two-thirds of the distance between the stanchion and the gutter: cows are fastened with swinging stanchions and Newton bow tie. I prefer the Newton tie. I use cut straw for litter, but still have some difficulty in keeping the cows as clean as I would like.

Use cement gutters connected with underground drains to the manure pit, which is lower than the stable and is also cement and water-tight. The dry manure is carried there in wheelbarrows. Am firmly convinced (after using for several years) that cement makes the best and cheapest floor for cow stables.

I have dehorned cows. From the standpoint of cruelty the practice is not very objectionable, but with the ever-increasing (and much more profitable) system of keeping our cows in the stable from fall until spring dehorning has few advantages. I have abandoned it.

We use a hand separator and sell cream in the summer and do not store ice at present. Believe it to be indispensable to summer dairying and expect to build next year. Will be pleased to have an opportunity of getting the views of others on this subject through your paper.

F. L. FULLER,

Truro, N. S.

Supt. Gov't Farm.

I feed morning part straw noon whe meal), ab of bran sp prepared gels night and eveni all the oth are water when ensi

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Perth C Dcidi

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Our s together deep, bu point we We hav inches d receive t ing agai inches w of our c The gutter cement, litter en directly have ha think of cementi block w same as four to s as we li needed, year. V and thi effects, i Huron

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To the E SIR, well-ear sweet c grain me to the a or cut s stable i baseme cows ar neck; t We use a day in of abso ters. A liquid horned ing at t in her I am r

Ensilage and Dehorning Approved.

I feed ensilage mixed with cut straw or chaff morning and evening, two parts ensilage and one part straw or chaff, with a feed of clover hay at noon when I have it. Oats, barley and peas (mixed meal), about seven pounds a day, a small quantity of bran sprinkled on the ensilage mixture, which is prepared some time before using, and a few mangels night and morning. I feed the meal morning and evening, but have never fed meal heavily, but all the other fodder which they will eat. The cows are watered once each day, which seems sufficient when ensilage and roots are used.

My stables have an overhead connection with a large manure shed, which modifies the air very much. I would prefer to have the air admitted by underground pipes to prevent frost and taken out by ventilator pipes to the roof of the barn.

I have the ordinary kind of stall—plank floor and gutter. I am of the opinion that some such device as Hoard's stall would be a distinct advantage. We bed the cows with cut straw.

The manure is put in a manure shed and drawn directly to the field once each week. The liquid is run into a tank and drawn out in barrels on a boat every few days. I have some cement floor and it gives entire satisfaction. Would certainly put in cement if flooring again. Have had cows dehorned for some years. They are quieter and much more easily handled, especially when drinking. The custom of dehorning is almost universal in this locality. We use a small quantity of ice for the purpose of keeping Saturday night's and Sunday morning's milk, which is sent to the cheese factory Monday morning.

Only using eight or ten loads in a year, our ice house is not very expensive; about twelve feet square, partitioned off the pigen, on the north side. The sides are double boarded and filled in between with eight inches of sawdust. The ice is packed with sawdust, pea straw below to allow drainage, and a light covering of sawdust and straw. There are some improvements which I would like to have, especially the water in the stable. WM. MOUNTAIN.

Perth Co., Ont.

Decided Approval of Cement Floors -- Lucern Beats all Other Fodders.

We are feeding this winter corn, millet, green oats and peas, lucern and oat straw, at different periods, mixed and separately, with and without grain, bran and roots. Our opinion is the same as it has been for the past year or two, namely, that well-cured lucern beats them all; it appears to be the cheapest all-round ration, the cattle thrive and milk best on it, and are very fond of it as well. A grain ration of ground peas and oats keeps the milch cows in better condition, but does not pay for itself in milk, while we cannot find much, if any, return for bran and roots. We feed five times per day: at 6 and 8 a. m., feed of straw at noon, and feed again at 4 and 6 p. m. We water just once a day as a rule—at noon. Have made no special study of ventilation, but are anxiously awaiting to learn the experience of those who have.

Our stalls are the old style—two cows tied together and an open crib 2 feet wide by 1½ feet deep, but find it very wasteful; this is another point we intend improving, and want information. We have a drop behind the stalls 14 inches by 6 inches deep, but do not find it sufficiently large to receive the manure for one day. If we were building again we would have the gutter at least 20 inches wide and 8 inches deep. I think the majority of our cows then would keep comparatively clean. The gutters and passages behind stalls are made of cement, and serve the purpose admirably. With litter enough to absorb the liquid manure spread directly on the ground the loss is minimized. We have had cement for four years, and would not think of flooring with anything else. We are cementing the stables as fast as the plank and block wear out. The material costs about the same as plank, and instead of our floors lasting from four to six years, we expect them to remain as long as we live, or for the next 100 years if they are needed, as they grow harder and harder every year. We had our cattle all dehorned a year ago, and think it a great convenience; have seen no ill effects, but plenty of good ones. F. C. ELFORD.

Huron Co., Ont.

Favors Ensilage, Dehorning, and Cement Floors.

To the Editor FARMER'S ADVOCATE:

SIR,—My cow fodder consists of ensilage from well-eared corn, straw, and dry fodder made from sweet corn. Hay is too expensive as a rule. As grain food, I have had the best results from feeding pea meal, from six to ten pounds a day, according to the animal; we mix the grain food with ensilage or cut straw, and feed and water twice a day. Our stable is ventilated by chutes running from the basement up through the roof of the barn. Our cows are tied two in a stall with chain around the neck; the chain slips up and down on a stanchion. We use plenty of bedding, and clean stables twice a day in order to keep them clean. We keep plenty of absorbents, either straw or sawdust, in the gutters. Am in favor of cement floors for saving the liquid from loss. I had ten of my dairy cows dehorned about a year ago; most of them were milking at the time, and only one out of the ten shrank in her milk, and she recovered in a couple of days. I am much in favor of the practice of dehorning.

We store a large quantity of ice every winter, as we raise all our cream by setting the milk in ice water. We store our ice in the end of a shed, part of which is partitioned off for that purpose and lined up and packed with dry straw. The cost was very trifling, as we did the work ourselves. We cut our ice in blocks twenty inches square, and pack as closely as possible in the ice house, filling in all spaces between the blocks with broken ice, as a great deal depends on this. Around the sides of the ice we leave a space a foot wide, which is well packed with either sawdust or dry straw packed tight. The ice is covered the same way, but we are careful to have plenty of ventilation over the top of the ice, as this is of the greatest importance. Brant Co., Ont. R. S. STEVENSON.

Winter Dairying.

To the Editor FARMER'S ADVOCATE:

SIR,—There are certain difficulties in winter buttermaking on the farm which seem to return annually in spite of all that is said and written on this subject, and with your permission I will try and say something which may be of some help to those who are still laboring under difficulties with their butter.

First I will take up the shallow-pan system for winter buttermaking. It has been the experience of those who have used the shallow pans that but little cream will rise on the milk when set in a cold cellar in the winter time, and almost invariably the pans are set in the pantry or in some other room near the kitchen where the milk is allowed to absorb the kitchen odors, and the cream crock is usually allowed to stand in the same place, and by the time churning day arrives the cream will have absorbed a variety of odors, and will have that old, unpleasant flavor so often found in winter dairy butter.

Another objection to the shallow pan is the large loss of butter-fat from imperfect skimming; the old-fashioned skimmer is responsible for the loss of thousands of pounds of butter annually, and no doubt our mothers and grandmothers used to think they were the very best thing ever gotten up for the purpose. In making some tests with the shallow-pan setting at the Guelph Dairy School last winter I adopted the plan of running a knife around the edge of the cream next the pan and then ran the cream off into a pail, blowing off any small particles which remained behind. One of the lady students objected to the method as not being as good as the skimmer, so I procured a skimmer and requested her to skim a pan, and we would see if there was any difference in the results from the two methods. I then took a sample from each pan and tested them for butter-fat, with the result that the milk skimmed with the skimmer contained six-tenths of one per cent. of fat, while the other sample contained only three-tenths or half as much fat. The lady was astonished and said she would try again, and be more careful the next time. We afterwards repeated the experiment with practically the same result. The reason is plain when we look at it. Every time the skimmer is filled with cream a portion of the thin cream on the under side of the cream layer runs through the holes and immediately mixes up with the milk and is lost, while by running the layer off whole the cream has no chance to become mixed up with the milk. Taking the above loss as a basis, a farmer having a herd of eight cows, each giving 5,000 lbs. of milk annually, would lose 120 lbs. of butter-fat, or 135 lbs. of butter.

The deep-setting system is the best for winter as well as for summer dairying; but we must have ice at all times, otherwise I would prefer the shallow pan for summer, but in the winter any one can usually have ice. The tank or barrel to hold the cans will do in the wood shed or back kitchen, as a little freezing of the water above the milk will do no harm if the cans are weighted down so that the milk is below the water line. The milk should be warm when put into the ice water, and I think it advisable to pour a little hot water into the milk and raise the temperature up to about 100 degrees.

Properly caring for the cream is what is worrying a good many buttermakers at the present time, for what is right in summer may be entirely wrong in winter.

I liked the tone of the letter from the lady "Esme," Ontario Co., for it showed that she has been reading up on the subject and was on the right track until cold weather overtook her operations. The way she went at the "starter" business was the proper thing to do under the circumstances, but I think there is a better method, for there is danger in keeping cream in a cold cellar at this time of the year, as it is liable to turn bitter if kept at too low a temperature for several days. I have found excellent results from the following plan: Take a pint of good starter, either sour milk, buttermilk, or sour cream, and put into the cream vessel with the first lot of cream, which should be at a temperature of 70 to 80 degrees, and set it in the cellar or other cool, sweet place, and add each skimming of cream at the same temperature, which will start the acid to develop slowly, and by churning day it may have acid enough without any further trouble. If it seems to be developing too much acid the cream should be added at a lower temperature, as that will depend upon the temperature of the place where the cream is kept.

If those whose cows are fed turnips will follow the above plan and heat their cream up to 160 degrees by putting it into a tin pail and setting the

pail into a pot of boiling water and stir until the above temperature is reached, then let it stand twenty minutes and cool down to 80 degrees before putting it into the cream vessel, I think they will be surprised at the improved flavor of their butter, for it will effectually remove the turnip flavor and perhaps some other flavors too; but don't attempt to heat the cream without a thermometer, for if the temperature goes above 160 degrees it is liable to have a scalded flavor after it is cooled down. This method is called "pasteurizing," and is being practiced largely in the leading dairy countries. Another difficulty at churning time is in having thin cream and then attempting to churn at too low a temperature. By thin cream I mean cream that has a low percentage of butter-fat in it. Cream may be as thick as molasses in winter if well ripened and still be poor or thin in butter-fat, and such cream must be churned at a high temperature or it will froth and break into very small granules and will refuse to gather any larger. Still another difficulty is in having cows that have been a long period in lactation.

Most farmers will have one or two cows that are farrow, and which they want to milk all winter, and the longer they are milking the harder their milk is to cream, and the more difficult their cream is to churn. The milk from such cows often gives no end of trouble, and it is sometimes advisable to either churn their cream alone or use it for other purposes, rather than have the cream from other cows spoiled by it. J. STONEHOUSE.

Perth Co., Ont.

Milk of Holstein-Friesian Cows.

I am requested to write of my experience and observations in testing the milk of Holstein-Friesian cows. Having been connected with the Agricultural Department of the State of New York for the last five years as agent and milk inspector, I have had ample opportunities to determine the quality of milk produced by these cows, and to compare this quality with the quality of milk produced by other breeds.

I have found the milk of Holstein-Friesians uniformly above the New York State standard, not only by the lactometer but also by the Babcock test. In all my five years' work I have never made a case against a registered Holstein-Friesian herd or cow, and I have never retained a sample of their milk after testing for such a purpose. I have watched the milkings closely and tested the milk carefully, for I have been aware of reports against its quality that have been circulated. I am now satisfied that such reports have had very little foundation in fact.

I have recently tested several entire herds with the Babcock machine, and I am very glad to lay the results before you. The milk of one herd of 17 registered cows, fed hay, weak silage and a ration of equal parts gluten meal and wheat bran, tested an average quality of 3.6 per cent. fat. The milk of no cow of this herd fell below 3.2 per cent.; the milk of several of the cows tested 4 per cent., and that of one cow tested 5.4 per cent. Nearly all the cows of this herd were fresh in milk at the time of testing. The milk of another herd of 18 registered cows tested 3.7 per cent. fat. The milk of six of these cows tested 4 per cent., and the milk of the remaining 12 ranged in tests from 3 to 3.8 per cent. fat. This herd was fed but little better than the herd above reported. A third herd consisted of two-year-old heifers, all fresh at time of testing. Their milk averaged 3.2 per cent. fat. As I learned that these herds were fed gluten meal and bran with hay and inferior silage (I mean by inferior silage such as is made from corn not heavily eared), I confess I was surprised at the results. Upon such light feed I found these cows giving milk that would make from three and a half to six pounds of butter per 100 pounds of milk. I am prepared to assert without fear of successful contradiction that no breed that I have tested would make a better showing under similar conditions. When we bear in mind that large butter records are made under conditions of careful and judicious feeding we can better appreciate these results. The owners of these herds are producing milk for New York City market, and sought to produce quantity rather than quality of milk.

I will add an account of observations of three other herds, the cows of which were not tested in detail. The herd of J. W. Coley, of Madison County, this State, consists of 27 cows. The superintendent of New Woodstock cheese factory informed me that this herd averaged 16 per cent. cream. This is a heavy per cent. for any breed. The herd of A. F. Cole, also of Madison County, has been tested by me several times; that is, the milk. The lactometer readings have averaged 108 specific gravity at a temperature of 60 degrees. Mr. Cole delivers his milk at a shipping station, where the milk of other breeds and grades of cows is also delivered. The milk of Mr. Cole's herd tested the best of any delivered at that station. The herd of Mr. S. L. Hoxie, also of Madison County, gave the same lactometer reading as the milk of Mr. Cole's herd. I have found that the general averages of lactometer readings of the milk of cows of this breed range from 104 to 110 specific gravity at a temperature of 60 degrees. I have found the general averages of milk of no other breed to range higher.

CHAS. F. NASH,
N. Y. State Milk Inspector.

Selection and Breeding of Channel Island Cattle at Home.

Were the selection and breeding of dairy cattle better understood and more depended upon in the building up of dairy herds there would be less heard of unprofitable dairy cattle than at present. While the right foundation is absolutely necessary to success, the heifer's development and training has much to do with her future as a cow. The Channel Island breeds are recognized as special purpose cattle of peculiar excellence, and a glance at the practice of their breeders will teach much from which dairy husbandmen can appropriate lessons. Mr. F. S. Peer, of New York State, who has frequently officiated as judge of dairy cattle at our largest exhibitions, writes in the *Country Gentleman* an interesting account of the Channel Island selection and breeding as observed by himself while spending several weeks among the breeders.

After referring briefly to the history of the Guernsey and Jersey breeds, he draws the conclusion that the most practical dairy cow is one that weighs from 900 to 1,000 pounds. He has reached the conclusion that if dairymen with a lot of 1,200 to 1,500 pound cows will begin weeding out the poorest paying cows from their records of food consumed and produce, they will find as a rule the first to cull out are the largest cows.

The superior merit of the Island-bred cows is due, says Mr. Peer, to the practice of selecting and breeding on the principle of *individual merit*. The account given is as practiced on the Island of Jersey, it being the largest of the groups. These farmers are able to support themselves, live comfortably, largely feed their own population of 55,000, and the 40,000 to 50,000 visitors, and export from the little Island from \$3,000,000 to nearly \$4,000,000 worth of farm and garden produce yearly. This is an example of intensive farming from which Canada has something to learn. The Island is divided into eleven parishes, each having its spring and autumn shows, while in May or June the Island Society has what is called the "Island Show." The spring parish shows are for bulls only—yearlings and older. A bull to win a prize must be accompanied by his dam. Both the dam and the bull are scored, the first prize going to the bull whose score, added to that of his dam, foots the highest. In all these awards pedigree is not taken into account. Not one farmer in ten can tell the breeding of his cattle, so that if one wants to know the pedigree of a beast he has usually to consult the Island herd books. The winner at this show must stand in the parish for two years at a nominal fee. The prize is forfeited if he is sold before the expiration of the time. The result is that the first prize bull becomes the leading stock bull of the parish. Notice the result. If a farmer has say three bull calves dropped on his farm, he keeps only the one out of his very best cow and kills the others, because there is no use to take a bull to the show unless he has a high-class dam to accompany him, no matter how well he may be bred. This best cow has likely been driven to the parish stud bull. It will thus be seen that the selections are made entirely on the combined individual merit of the bull and his dam.

The system of entering an animal in the herd books is also purely on the ground of *individual merit*. When a calf is born the owner must go within thirty days to the secretary of the herd book and give a description, markings, etc., of the calf and date of birth. He then receives a paper, and record is made of the calf, but no herd-book number is given until the heifer or bull is approved by a committee. Bulls can receive their numbers as yearlings—their dams are shown with them—but heifers must wait until they have calved. Every six weeks three expert judges, the secretary of the herd book, and other officers start out on a tour of inspection. All the heifers that have dropped calves since the last inspection in that and adjoining parishes must be presented at a certain farm where the judges are advertised to be. Heifers for the herd book inspection are brought without their dams. They are carefully inspected one at a time, and if worthy receive a commended or highly commended card. It is observed that the heifer corresponds to the original description as given by the owner when she was a calf, and if so she is entered on the herd book of the Island Cattle Club and given a number. If they fail to pass this critical inspection (and quite a number do) no card is given and they cannot be recorded. Sometimes the daughters or granddaughters of champion cows, and sired by one of the best bulls, fail to get into the records because of some slight defect, such as a deficient forehead or the like. Should such a rejected cow produce a good enough heifer calf to pass inspection she would have to go in not as herd-book stock, but foundation stock, and that between the ages of two and three, and the owner must pay a fine of \$5 to get her on even then. It will be recognized that the greatest possible care is taken to keep the standard high, which course has had much to do in producing these superior breeds of special purpose dairy cattle.

Although the Channel Islanders are mostly entirely ignorant of all commonly observed principles of breeding, continues Mr. Peer, their method of selecting and breeding from individual merit is the only correct and highly scientific one to pursue. The solid color craze and pedigree craze have done much to deteriorate the Jerseys this side the Atlantic, especially in dairy form. As to dairy capa-

city, the American-bred Jerseys are above the Island cattle. The Islanders are so mortally afraid of milk fever, which is very prevalent there, that they do not feed anything like the quantity that is fed in the United States; besides, something like 75 per cent. of the cattle food is roots.

Another reason why the Island cattle, whatever they may be, are always genuine *dairy cattle* is the method of feeding. In this respect the Islanders are almost entirely ignorant from a technical standpoint, and unconscious of being scientific, but in this respect also, as in their farming and breeding, they are the most scientific, at least so far as feeding to produce dairy cows is concerned. Calves are taken from their dams the day of their birth or the one following. From one to four weeks skim milk gradually takes the place of whole milk, then they are given roots as soon as they will eat them. The writer feels warranted in saying that during the first year of the calf's life the diet is skim milk and roots; very little grain is ever fed. The calves are rough looking, bony and paunchy, but when they come into milk they are dairy cattle and no mistake.

Fortunately, the Islanders are contented to let the Englishmen grow their beef for them. An English farmer goes over to the Island and pays £50 or £100 for the best 2-year-old and raises a heifer calf from her. The more he pays for the cow the more certain he is to spoil the calf. He feeds the heifer a strong, fattening grain ration and the calf is born with more or less inclination to produce beef. The owner then proceeds to complete the calf's ruin for dairy purposes by feeding it all the new milk it will take, with oil meal and cooked grain added. She wins a prize with an English judge as a yearling and is twice the size of an Island calf of the same age, but when she comes fresh in milk she is a failure, comparatively, and the Englishman, when he wants a high-class cow, must go back to the Island and plank down another round sum for a heifer that as a calf came up on skim milk and roots.

POULTRY.

The Ontario Poultry Show.

The twenty-fourth annual exhibition of the Ontario Poultry Association, held in the City of London, proved to be the most successful both in quality and quantity of any yet held under the auspices of the Ontario Poultry Association. The management was first-class in every particular. One thing to note was the feeding and watering. Birds were not overfed, and on their arrival, when placed in their respective coops, only a small quantity of water was allowed each bird, as it should be, the effect of which was shown by the health of the birds during the entire exhibition. There was one mistake made in the cooping of the birds, in not placing them in rotation and on the same tier or level. The mixing up of the old and the young birds made it quite awkward for the judges, and in several varieties birds were overlooked when the judges were making their awards, necessitating extra work, as the classes effected had to be rejudged. We heard but few complaints about the comparison system of judging, as was adopted by the Association this year, instead of the scoring system, as has been the custom for several years in the past. Yet there are a great number of fanciers who yet prefer the latter method of judging, especially the amateurs, who wish to know the defects, if any, in the stock shown. Every class of standard bird was well represented at this show, and in all varieties there were birds not receiving a prize fit to win in strong competition. We noticed in the heavy varieties of fowl a marked improvement over last year so far as size and weight were concerned. We would certainly recommend to the officers of the Association the advisability of having all birds with weight clauses weighed, no matter whether the birds are to be judged by comparison or otherwise. The result will be if we continue to judge our shows without weight being taken into consideration the utility classes of fowl will decrease instead of increasing in size, as is so much desired. Color of plumage and shape will be the particular objects in view when selecting the birds for exhibition.

The specimens in the Asiatic class, not only in color of plumage but in size, were far ahead of any exhibit made in any former year at the Ontario Show. The Rocks also were well represented, and several birds not receiving a prize would be considered extra fine specimens. The Wyandottes in all varieties were out in full force, and it must have taken Judge Smith considerable time to decide where to place the tickets. Mr. Butterfield, who judged the Game class, said he never saw so many and such fine specimens in every variety shown as were placed on exhibition. Mr. L. G. Jarvis has judged the water fowl every year since the Ontario show was organized, and he claims the display made this year was certainly the largest and best ever made during that time. The exhibit in all varieties of turkeys was simply immense and was admired by all who availed themselves of the opportunity of seeing this great show. W. H. Beattie, Wilton Grove; W. E. Wright, Glanworth, and Andrew Elliott, Pond Mills, did well in these classes. The French classes, especially the Houdan variety, were the finest seen for years, and the competition very keen. The Polands were

the center of attraction, especially with the ladies, who admired the beautiful plumage and crests. London may be considered the home of the Poland; and Messrs. Bogue and McNeil, wherever they exhibit in that class, have never had to take second place. In Minorca the black variety particularly were very fine, and the winners in white also good. The Dorkings, that well-known class of fowl so much admired on the British markets, had some of the finest specimens in all varieties, and in several cases it was difficult to decide where to place the prize tickets. Time nor space will not permit at this time to give a full report of this the Crystal Palace Show of Canada.

Ontario Poultry Association.

The 24th annual meeting of the Ontario Poultry Association was held in London on Jan. 13th, being the 3rd day of the show. The President, Mr. Allan Bogue, in his opening address pointed out that the advance made by the Association within the last year was by far the greatest ever made in the same length of time. Rapid progress has been made ever since the Ontario Minister of Agriculture increased the grant to the Association. It was pointed out that birds of some breeds that can win prizes at this show can do so in any part of the world. The way for winning prizes is becoming harder and harder each year. This show found many new exhibitors in the field who are made of the right sort of stuff to lead.

Secretary Thos. A. Browne's report showed that for six years the entries have steadily increased. This year they number 1,899, against 1,622 in 1897. This great advance was considered largely due to the increased number of specials offered this year. It was recommended that the old method of having the essays read and discussed on the same day as the annual meeting be returned to. This grew out of an inability to hold a meeting to hear the essays because of lack of attendance. It was therefore finally resolved to dispose of both business and essays on the 3rd day of holding the show in future years. It was also resolved as the result of a recommendation of the Secretary that clerks assisting the judges and other employees be paid for their services and controlled by the Secretary and President.

Officers:—Hon. Pres., Geo. H. Bertram, M. P., Toronto; President, Dr. A. W. Bell, Toronto; 1st Vice President, Wm. McNeil, London; 2nd Vice President, M. T. Barn, Tilsonburg. Directors—D. C. True, Lindsay; Chas. Bonnick, Toronto; T. J. Senior, Hamilton; R. F. Webber, Guelph; T. H. Scott, St. Thomas; T. Brown, Durham; A. Bogue, London; E. Donnelly, Sandwich; J. W. Bell, Angus. Auditor, H. B. Donovan, Toronto. Delegates—To Industrial Fair, Toronto, Messrs. Jos. Dilworth and Wm. Barber; Western Fair, London, J. H. Saunders and Geo. McCormick; Hamilton, John Cole and Mr. Dickinson. Mr. Wm. McNeil, London, was appointed as delegate to the American Poultry Association meeting in Boston to invite their 1899 convention to Toronto, to be held during the Ontario Poultry Show.

Letters were read from the Hon. John Dryden, Minister of Agriculture for Ontario, and Hon. Sydney Fisher, Minister of Agricultural for the Dominion, expressing regret that they could not attend, but the latter gentleman was represented by Mr. A. T. Gilbert, superintendent of the Poultry Department at the Central Experimental Farm at Ottawa, who delivered an interesting address. After congratulating the Association on the success of the show, he pointed out what the Governments were doing for the poultry industry. The Legislature, by granting money to the Association, assists the development of pure-bred fowls. The Dominion Government, by opening up a cold storage transportation, has created a demand for pure-bred fowls, males especially, from which to produce dressed poultry fit to ship to Great Britain. Mr. Gilbert was pleased to notice that at the later large poultry shows there is less evidence of sacrificing utility qualities to feather markings. Plymouth Rocks, Leghorns and other breeds as shown to-day are larger birds and better layers than formerly. Size is especially wanted in fowls to ship to England. Mr. Gilbert referred to his missionary work through the Farmers' Institute system, from which he is noting gratifying results. He is seeing the scrub banished and better fowls taking its place. Mr. Gilbert exhibited at the show a table of poultry beautifully dressed, as it should be, for the English market. The turkeys, geese and chickens in this collection were purchased from farmers who had taken up poultry-keeping according to his teaching at Institute meetings. This collection was very much admired by the many visitors.

By the aid of a chart it was shown that the hens kept on the Central Farm are managed to lay most of their eggs in winter, when they command the highest price. Some 201 hens of some 12 various breeds laid in Jan., 1896, 1,469 eggs; in Feb., 1,411; March, 1,569; April, 1,934; May, 1,699; June, 897; July, 485; Aug., 240; Sept., 82; Oct., 73; Nov., 568, and in Dec., 1,468 eggs; a total for the year of 11,893 eggs. It was found from observation that only from 115 to 120 of the hens were active layers, and these had to support the entire flock, which returned for the year \$2 profit for each hen. This is largely done by supplying during the winter season as far as possible summer food and summer conditions. The food consists of ground green bone 1 pound to 16 hens three times a week, and for the

other four months crushed green bone. They are never deeply littered during the winter, that active getting of the eggs are checked to lay are effort is made as possible, later when h

How Some

SIR,—We twenty white Leghorns vigorous birds last, and have December 1st and one quarter of them to March. We spring, and the pullets, weeks old with vision for h machine on week for the ing about si for breeding.

Our method winter eggs, two of of fine chop ground beef water and fine parts of cho fine shorts, ground beef ing hot water, cook carrots and vegetables three morn

Now, as t meals each two of bar cracked corn in the foren afternoon, g get a good fi in straw, etc

Wentworth

Bees in M

The seas "boom" year so it has pro from each h they are in they have taken out of weak condit that by the gathered th result was t I got about honey and c

It is hard times. One this after th combs all re one cluster because the down they s until nine t down and p work as th in the whol In my jour which I w me. As I d into a farm people) had hives look sewer pipee feet long ar being one inches in h about eight at the bott the door fo This is rath like, for a was rather a way tha vestigate v in the wor and give m Lisgar D

Encourag

I have b CATE, and make it th ment, if it est you tal as encoura spondence Rosedale

other four mornings a warm mash consisting of crushed grain, lawn clippings and cut clover hay. They are never fed a full feed. The floor is kept deeply littered with straw, chaff, etc., and several times during the day grain is thrown amongst it so that active exercise is taken by the hens in the getting of the grain. In the summer months when eggs are cheap many of the hens that have ceased to lay are marketed, and during September an effort is made to have all the hens moulted as early as possible, to be ready for work in December and later when high prices can be secured.

How Some Notable Egg-Producing Fowls are Fed.

SIR,—We have nineteen barred Rock pullets, twenty white Rock pullets, and sixty rose-comb white Leghorn pullets. They are all fine, strong, vigorous birds, and started laying 16th of July last, and have been laying right along, and during December they have averaged about twenty-five and one quarter dozen eggs each week, and we expect them to do better in January, February, and March. We hatched about seven hundred last spring, and we kept a few of the very choicest of the pullets, and the balance when ten to fourteen weeks old went to market. We are making provision for hatching now, and expect to fill one machine on 27th of this month, and fill one each week for the balance of the season. We are keeping about sixty of our very choicest Pekin ducks for breeding.

Our method of feeding poultry for procuring winter eggs is as follows: Three parts of chopped oats, two of chopped corn, three of fine shorts, two of fine chopped clover, one blood meal, meat meal, ground beef (equal parts) are scalded with boiling water and fed four mornings of the week. Three parts of chopped oats, two of chopped corn, one of fine shorts, two of bran, one blood meal, meat meal, ground beef scraps (equal parts) scalded with boiling hot water, and to this is added 25% of vegetables, cooked and mashed fine. We are using carrots and turnips, as these are the cheapest vegetables we can buy now. This mash we feed three mornings of each week.

Now, as to the grain, we feed for the other two meals each day as follows: Three parts of wheat, two of barley, one buckwheat, two oats, two cracked corn. This we feed about half-past eleven in the forenoon, and from four to half-past four in afternoon, giving the flock just enough so they can get a good fill by night. It is thrown on the floor, in straw, etc.

W. A. FREEMAN.

Wentworth Co., Ont.

APIARY.

Bees in Manitoba in 1897—A Large Honey Crop.

The season of 1897 has proved itself to be a "boom" year in regard to the honey crop—at least so it has proved with me. I have got more honey from each hive, and now that winter is just here they are in better shape for their long rest than they have ever been before. When they were taken out of winter quarters they were in rather a weak condition, but they built up very rapidly, so that by the time the honey crop was ready to be gathered they were all strong and active, and the result was that for every hive I had in the spring I got about one hundred and seventy pounds of honey and one good large swarm from them.

It is hard to understand this little creature sometimes. One swarm went away and left us, and this after they had been in a good hive with plenty of combs all ready for them for two days. Another one clustered on a branch of a large oak tree, and because there was no one at home to take them down they stayed there from three in the afternoon until nine the next morning, when we took them down and put them in a hive, when they began to work as though they were always at it. Still, on the whole they are a well-behaved lot of bees. In my journey this season I saw a kind of a hive which I would like some beekeepers to name for me. As I drove across the line at Gretna I turned into a farmhouse to water my ponies. They (the people) had about thirty hives of bees, and the hives looked as though they had made them out of sewer pipes, stood on end on a stand about two feet long and one wide, the main part of the hive being one foot in diameter and about fourteen inches in height. On top of this was placed a box about eighteen inches square and six inches deep; at the bottom of the round part of the hive was the door for the bees to pass in and out through. This is rather a rough description of what they are like, for as there was a swarm out at the time, I was rather afraid they might light on my ponies in a way that they might not like; so I did not investigate very closely, but perhaps some old hand in the work may recognize them by the description and give me the name of them.

Lisgar District, Man. G. G. GUNN.

Encouraging Note from Senator Reesor.

I have been very much pleased with the ADVOCATE, and think you are taking the right course to make it the best agricultural paper on this continent, if it is not that already. The zeal and interest you take in everything for publication, as well as encouraging a large and valuable class of correspondence, must continue to make it a great success.

Rosedale, Toronto. D. REESOR.

Ontario Beekeepers' Convention.

(Continued from page 10.)

"The Production of Comb Honey" was introduced in a short, comprehensive paper by Mr. J. B. Hall, of Woodstock. He stated as a first requisite a right strain of bees, those that will fill the brood chamber with brood, and not refuse to work in the sections when the time comes. He did not believe the hive had much to do with the securing of a large and nice crop of comb honey. He emphasized the necessity of seeing in September that bees had abundance of stores to last them until honey came again. He strongly urged the filling of sections with foundation, and not to use that which is tough. The apiarist must know about the time his honey flow begins and ends, and give supers as soon as needed and keep a little ahead of the bees and remove the honey just as soon as it is capped.

Mr. W. M. Orr being present at one of the sessions, he was asked to address the association. He stated that during the past year not a single sample of adulterated honey was traceable to a beekeeper. Concerning spraying, he asserted that it was not only useless to do so while fruit trees were in bloom, but absolutely injurious. He showed samples of the San José scale on both fruit and wood, and much interest was shown in the examination of these specimens. In speaking of it he stated that beekeepers were interested in it as well as fruit-growers, inasmuch as the scale would attack any variety of tree except pine and cedar.

"What is your experience with Carniolian bees?" was asked. Mr. C. W. Post expressed himself as well pleased with them, but the majority of those present did not agree concerning their various qualities. In answer to other questions asked, it was thought advisable to have an opening through the center of the brood combs in order to allow the cluster of bees to contract and expand during cold weather. In producing comb honey it was thought best to fill the sections with foundation, as it not only gave a better quality of honey but far more of it. About 70 to 85 per cent. as much comb honey, it was thought, could be produced as extracted. A majority of those present advised the clipping of queens in order to control swarms.

Again, referring to the subject of a British market for Canadian honey, it was moved by W. Couse, seconded by F. A. Gemmill, and carried, that we heartily endorse the action of the Government in placing a commissioner in London to look after the interests of Canadian products, and that we request honey to be placed on the list, and that we would recommend to the Government Mr. C. W. Post as an inspector to guarantee any honey which we may export.

Upon motion, Mr. J. Newton, of Thamesford, was recommended to the Government as a fit and proper person for Dominion apiarist.

Officers elected:—President, M. B. Holmes, Athens; 1st Vice-President, W. J. Brown, Chard; 2nd Vice-President, J. D. Evans, Islington; Secretary, W. Couse, Streetsville; Treasurer, M. Emigh, Holbrook. Directors—J. K. Darling, Almonte; C. W. Post, Trenton; J. W. Sparling, Bowmanville; A. Pickett, Nassagaweya; Mr. Jas. Armstrong, Cheapside; J. Newton, Thamesford; F. A. Gemmill, Stratford; W. A. Chrysler, Chatham; A. Wood, Nottawa. Representative to the Ontario Agricultural College, R. F. Holtermann; Inspector of Apiaries, W. McEvoy, Woodburn; Sub-Inspector of Apiaries, F. A. Gemmill, Stratford. Representatives to the Boards of Management of the Industrial Exhibition, Toronto, A. Pickett, Nassagaweya; London Fair, R. H. Smith, St. Thomas; Central Fair, Ottawa, J. K. Darling, Almonte. Auditors—A. E. Hoshal, Beamsville; Jacob Alpaugh, Revising Committee—J. D. Evans, Islington; D. M. Heise, Bethesda.

Guelph was selected as the next place for holding the annual convention.

GARDEN AND ORCHARD

Ontario Fruit Growers' Association.

(SPECIALLY REPORTED FOR THE FARMER'S ADVOCATE.)

(Continued from page 11.)

Dr. Fletcher followed Mr. Orr in an animated address of warning and appeal to all the fruit-growers of Canada. He said the San José scale was the most serious and dangerous pest that had yet come into this country. The scale will kill a vigorous tree in three or four years, and a tree once infested can never be made a profitable tree again, and may as well be cut out. It is better to destroy a tree at once than to try to save any part of it. It requires a magnifying glass to identify the scale, and when you know that you have found it all you have to do is to notify the agricultural stations at either Guelph or Ottawa. The best remedy to apply, outside of cutting out and burning, is to spray in the fall after the leaves have dropped with kerosene emulsion, and then during the winter with whale-oil soap. Prof. Taft, of Michigan, said the scale would stand from twenty to twenty-five degrees below zero in that State, and his investigations had shown that infested trees should be destroyed before the opening of spring to prevent the scale from migrating soon as the first warm weather comes.

Mr. C. C. James, Deputy Minister of Agriculture, Toronto, was present with copies of a bill now before the Ontario Legislature to provide legislation for the prevention of the spread of the

San José scale, and its extermination in infested orchards. The bill proposes a 25 per cent. compensation for all trees destroyed, and provides for the appointment of inspectors and valuers.

Prof. Taft, of the Michigan Agricultural College, had read a very valuable paper the evening before on "Orchard and Nursery Legislation," in which he showed that Michigan was far in advance of Ontario in legislation for the protection of the fruit-growing industry. In Michigan they had nursery and orchard inspectors under State authority, whose business it was to visit all nurseries regularly, and all orchards when known or suspected to be infested with any injurious insect or fungous disease. Through this system of inspection, Prof. Taft said, the State of Michigan had rid its peach orchards of the yellows, its plum orchards of the black knot, and had made satisfactory progress in preventing the spread and further importation of the San José scale. Mr. C. C. James was present to take pointers and receive suggestions from the experience of others and from practical fruit-growers as to the scope of the needed legislation for the present state of affairs in this Province.

All the meetings of the Association were well attended, and much interest was taken in the subjects under discussion. The closing session on Thursday evening was given over entirely to floriculture, and was attended by a large audience, most of them ladies. Mr. H. D. Groff, of Simcoe, gave a paper on the "Canna and Gladiolus"; Prof. Hutt, a paper on the "Chrysanthemum"; Mr. Jas. Lackie, of Waterloo, a paper on the "Cactus"; and Mr. R. B. Whyte, of Ottawa, on "Annuals for the Amateur Flower Garden."

The Treasurer's annual report showed the Association in better standing than it had been for years. The total receipts for the year, including the Government grant of \$1,800; subscriptions for the "Horticulturist," \$3,325.15; advertisements, \$538.25; \$5,663.40. The total expenditure for the year was about \$5,400, leaving a balance in hand of about \$260, with nearly \$600 of overdue subscriptions to collect. The affiliated societies have increased in two years from eleven, with a membership of 798, to twenty-eight societies, aggregating a membership of 2,076.

As the Association has been widening the scope of its operations and embracing other lines besides fruit-growing, a committee was appointed to reconstruct the constitution and by-laws in conformity with its increased functions and wider scope. The reconstructed constitution will cover floriculture, arboriculture and forestry. The officers elected for 1898 are as follows: President, W. E. Wellington, Toronto; Vice-President, W. M. Orr, Fruitlands; Directors—Division 1, W. A. Whitney, Iroquois; Division 2, R. B. Whyte, Ottawa; Division 3, G. Nicol, Kingston; Division 4, W. Boulter, Picton; Division 5, Thomas Beale, Lindsay; Division 6, E. C. Beeman, Newcastle; Division 7, M. Pettit, Winona; Division 8, A. M. Smith, St. Catharines; Division 9, J. H. Scaff, Woodstock; Division 10, J. A. Morton, Wingham; Division 11, T. H. Race, Mitchell; Division 12, Alex. McNeill, Windsor; Division 13, G. C. Caston, Craighurst. Auditors—A. H. Pettit, Grimshy; G. Fisher, Burlington.

The Association will hold its next annual meeting at St. Catharines.

The Other Side of Grape Growing.

A Niagara district grape grower in writing us encloses the following letter, which should lead to an interesting discussion:

"I enclose sheet of the result of my grape crops for 1897, which might be suggestive to some other growers, who, perhaps, have not calculated the actual cost of marketing their crop. In this you will notice there is no charge for hauling or for packing and putting covers on the baskets. The \$6.98 per acre is to pay for pruning, tying, cultivating and manuring, so I have come to the conclusion that grapes at \$10 per ton at the winery and \$20 in the Montreal market do not pay, although the shipments to that city paid better than those to Toronto at Toronto prices. I must get a heavier yield and better prices or give up the business and grow something else.

"I put \$70 worth of fertilizer on five acres, which showed a great improvement over last year, but did it pay? Yet to improve the yield I must use fertilizer or manure.

GRAPE REPORT FOR 1897.

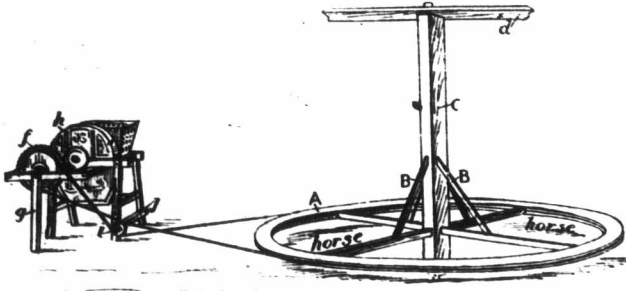
Total shipments to Montreal and Toronto—	Baskets.	Weight.	Freight.	Comm'n.	Sold for
1,437	28,970	\$105 42	\$30.01	\$326.16	
Deduct freight.....		\$105 42			
Deduct commission.....		30 01			
Baskets.....	71 62				
Packing.....	14 37				
		\$221 42			
		\$104 74, or 3 7-10 mills per lb.			
Shipped to wine factory, 19,967 lbs.....		\$ 59 83			
Less for bbls.....		2 50			
Less for packing.....		9 98			
		\$12 48		\$ 87 35	
				\$ 192 09	
Total shipment, 48 937 lbs., netting 3 9-10 mills per lb.					
Freight, per basket.....	7 3-10				
Comm'n, per basket.....	2 1-10				
Baskets, 5 cents each.....	5				
Picking.....	1				
		15 4-10, expenses per basket.			
Sold at an average per basket, 22 7-10.					
Net income for 15 acres, \$104.74, or \$6.98 per acre.					

"I think this report shows 'the other side of grape-growing,' and it would be interesting to hear from some others."

THE HELPING HAND.

Homemade Horse Power.

JAMES HAYDEN, Huron Co., Ont.:—"Having seen so many plans in your valuable paper for cheap horse powers, I thought I would send a description of the one we use for either one or two horses. Our barn floor is fourteen feet wide. I cut out breast beam opposite to granary so as to put in a 16-foot wheel. The rim is built similar to the rim of the curb of a well, by using three thicknesses of inch lumber 8 inches wide, the center piece left in about 1 1/2 inches, so as to make a groove to hold the rope or chain, just like a very large pulley, putting together with bolts, as it can then be taken apart when not in use and packed away. I got cog wheel off of the big wheel of an old binder, and got a smaller one cast at the foundry, which we put on and keyed to the axle of cutting box; then I bolted

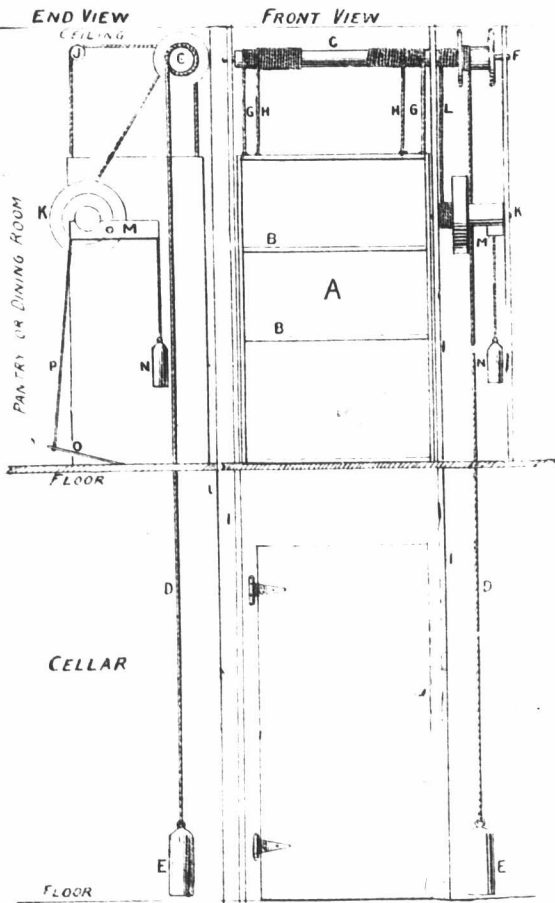


(a) Rim; (b) braces; (c) upright; (d) 2x6 scantling to hold top of post; (e) small cog wheel; (f) driving wheel off old binder; (g) frame to hold gearing to cutting box; (h) cutting box; (i) hayfork pulley to guide rope or chain on large pulley; (j) 2x3 scantling bolted to cutting box to fasten pulley to.

a large pulley (f) to cog wheel, and placed in frame and fastened to frame of cutting box for the rope or chain to work on. The horses turn to left, and it runs about as fast as you would drive it with an engine. It may be worked without gearing by placing a 7-inch pulley on axle of cutting box, but it is much slower and harder to drive, as I have tried both ways. I would not want a better power. I built the rim of big wheel one foot from floor, so the horse can step in without pulling it down, as the horse works inside of rim; then when done cutting all you have to do is unhitch and walk horse out, and it may be left ready for use at any moment."

Cupboard Elevator.

WM. MOUNTAIN, Perth Co., Ont.:—"For sending victuals into the cellar, such articles of diet as bread, butter, meat, etc., which require moisture or cold, an elevator like the accompanying sketch will save much stair climbing. A is the cupboard, 2x3 feet; B and B are shelves, suspended from ropes G H on rollers J and C; C being at the back with weight wheel F; the rollers run in the sides of shaft I, running from ceiling to cellar floor. When cupboard is up, lower end should be level with floor; when down, top end level. Sides of shaft should be a little larger than cupboard, to let it work easily. Weight wheel F is made by nailing

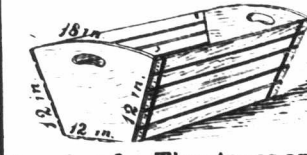


inch strips on to roller C, which is three inches thick. Weight wheel must have flanges to keep rope D on, which carries weight E, which must be heavy enough to hold empty cupboard up in place. Both ropes G H wind on roller C, roller J being only a traveler. Ropes G and H should not be opposite, but allow space for rope rolling on roller C. The cupboard and weight balancing, use fric-

tion wheel K to control the extra weight of dishes and food. Make K from boards. Hand wheel six-teen inches diameter, and rope roller end and friction lever end each five inches. The rope L goes from friction wheel K to C roller. Friction lever M is bolted to outside with two-thirds or more of its length on weight N end, cut out to fit friction wheel. On the other end from weight attach a rope P, and attach the other end to a small tread O, which is fastened to the floor. Friction wheel K is to raise the cupboard when loaded, and friction lever M is to hold it at any desired place. Use three-eighth and one-half inch ropes. The lengths can easily be reckoned according to height required."

Root and Chaff Basket.

J. H. TAYLOR, York Co., Ont.:—"As I see some of your subscribers are sending you useful ideas, I will try to imitate in a small way, hoping some one will try it. I have used for years a root or chaff basket made thus: The ends are made of inch pine, 18 x 12 x 12, and sides and bottom are made out of old salt barrel staves, any length you desire, nailed on and afterwards bound with thin



iron band. The staves are left open or apart about three-eighths of an inch. It will last out a dozen willow baskets of any kind."

QUESTIONS AND ANSWERS.

[In order to make this department as useful as possible, parties enclosing stamped envelopes will receive answers by mail, in cases where early replies appear to us advisable; all enquiries, when of general interest, will be published in next succeeding issue, if received at this office in sufficient time. Enquirers must in all cases attach their name and address in full, though not necessarily for publication.]

Legal.

Unfulfilled Contract.

ENQUIRER:—"After tenders being called for by the trustees, A was given the contract to supply a school with wood; but A failed to fulfil his contract. 1. Can he be compelled to do so? 2. Are the trustees bound to enforce him to do so?"

[1. If the tender of A was accepted and he was notified of its acceptance in the regular way and within a reasonable time, or if A has partly filled his contract, he of course is compellable to complete his contract or make good in action for damages the loss caused by him. 2. No.]

Right to Cut Trees on Roadside.

ELECTOR:—"Has a pathmaster the right to cut down trees (pine trees—natural growth) on the roadside after being forbidden to do so. The trees in question were standing 11 to 18 feet from the fence?"

[We, of course, understand from the above that the trees stood upon the public highway, not upon private property. The Statute of Ontario, 1892, Chapter 42, S. 479, S. S. 20, provides for such cases, and that section confers upon the council of the municipality power for causing any tree growing or planted on any highway to be removed if and when such removal is deemed necessary for any purpose of public improvement; but any owner of adjoining property shall be entitled to ten days' notice of the intention of the council to remove such tree, and shall be entitled to be recompensed for his trouble in planting and protecting the same. No owner of adjoining property, nor any pathmaster or other public official, nor any other person, shall remove or cut down or injure such tree on pretense of improving the public highway, street, or road, without the express permission of the municipal council having the control of the highway, street, or road.]

Veterinary.

Bone Spavin.

ARTHUR E. GILBERT, Norfolk Co., Ont.:—"Will you kindly let me know if there is anything that will kill a bone spavin? I have had it fired and blistered. Sometimes you could scarcely notice anything wrong with her; at other times she is dead lame. It has been blistered so much that the hair is killed; is there anything that will start it growing?"

[Where bone is deposited on the seat of spavin and it becomes confirmed, there is no method known that can remove it. The object of firing and blistering is to prevent growth and remove the cause of lameness. If the blistering is so severe as to kill the roots of the hair no method will restore what has been destroyed by the destruction of the skin. DR. W. MOLE, M. R. C. V. S.]

Warts or Wens.

B. SHANNON, Nipissing District, Ont.:—"My neighbor's cow has a large wart or wen on her teat about five inches long, two inches wide and one inch thick. As she is due to calve early, he wishes to know if there is any way of removing it. Please advise as to treatment through your paper?"

[It is difficult from the description to decide to which disease this growth belongs. If a wen it is generally found to exist in the shape of a ball with a growth of hair on the inner side and due to an involution or turning in of the skin. If a warty

growth it is composed of irregular-shaped mass of thick, fleshy material, which grow in clusters and present a raw, bleeding surface, others have a perfectly smooth one. Very little can be done in the way of treatment. They may be dissected out and the wound cauterized with the hot iron or nitrate of silver. A ligature of cord tied around the base as firmly as possible, tightened daily, will cause it to shrivel up, die and fall off.

DR. W. MOLE.]

Sick Fowls.

C. A. J. Simcoe Co., Ont.:—"Would you please tell me what is wrong with my hens and a cure for them? They turn dark in the head and waste away until they get very light and weak. They are sick about two weeks before they die, and eat hearty all the time. I feed sulphur in milk twice a week, and I have burnt sulphur in the henhouse. The house is in one end of the cow stable and the turnips are kept under it."

[When a hen's head is bright red in color we expect a good yield of eggs, as she is then in excellent health; but a dark head indicates an unhealthy condition, and shows itself in almost every case of indisposition. A fuller description of symptoms would have greatly assisted our understanding the case, but from the location of the house we would say that the trouble is probably arising from too much moisture, poor ventilation and too little exercise in the open air. It would be well to remove the hens to a light, dry, well-ventilated house. The whole flock should be given a good purge with Epsom salts. An easy way to do this is to feed scantily in the afternoon and keep the flock enclosed till next morning. Then mix two heaping tablespoonfuls of salts in a gallon of soft feed and allow them to take all they will. Then give the flock a tonic known as Douglas' Mixture, made up of a half-pound of sulphate of iron dissolved in a gallon of water and half an ounce of sulphuric acid added to one gallon of water. Mix the two together and add two tablespoonfuls to a pail of drinking water each second day. Unless the fowls have some contagious disease the above treatment should put them right.]

Swollen Tongue.

A. C., Middlesex Co., Ont.:—"I have a yearling steer which had a swollen tongue so that it hung out of his mouth six inches. I treated him for lump jaw; got some better, but not cured. What is the trouble, and what the cure, if any?"

[The tongue should be carefully examined to see if any foreign matters, such as barley awns, have lodged at its root, or a gathering may exist, which may need lancing. An ulcerated tooth might so affect the adjoining parts as to involve the tongue. In that case the tooth should be extracted and the cavity stuffed with iodized carbolio acid. The tongue is sometimes affected in cases of lump jaw, and when it is attacked the growth takes place as a rounded hard swelling, which has given rise to the name of *wooden tongue*, which is one of the worst forms of the disease, since the animal, in some cases, cannot eat, and curative applications cannot readily reach the seat of the trouble. A cure has in some cases been effected by administering iodide of potassium internally. A good purge of one to two pounds of salts should be given first, then give daily doses of one dram of iodide of potassium in a mash, gradually increasing the quantity to two drams in the course of a week. If the animal goes off its appetite cease giving the medicine for a few days, and then commence again. In about six weeks an improvement is generally noticed, the lump drying up and disappearing.]

Miscellaneous.

Agriculture in Argentine Republic.

A READER, Huron Co., Ont.:—"Where can I obtain general information as to the price and nature of the soil, and the crops grown in Brazil and Argentina? Where do they find a market for their produce, and what are the freight rates to Europe and the United States? I shall be pleased to learn something of that country in the FARMER'S ADVOCATE."

[We would recommend Mulhall's Handbook of the River Plate (Triibner & Co., London, Eng.); also "The History and Present State of the Sheep Breeding Industry of the Argentine Republic" (John Grant & Son, Cangallo 469, Buenos Aires), by Mr. Herbert Gibson. The author gives the values of land in the different provinces and zones, as well as general information with regard to same. *Agriculture.*—The soil and climate are fitted for all classes of agriculture. The country produces wheat, maize, linseed, barley, oats, etc., the first three being exported in large quantities. We expect to have from one to one and a half million of tons of wheat available for export when the harvest now ripening is gathered. Consuming markets, principally Europe. Brazil is in great measure dependent on this country for food stuffs and forage, taking flour and maize, as also baled hay ("alfalfa," or lucern), in large quantities. In the upper provinces, sugar, tobacco, wine, "quebracho" (for tanning), seeds for oil, and a new industry—cotton. Arable land varies in price according to proximity to outlets and railway communication. Good land can be bought at 10 shillings an acre, and lands farther out, but in touch with railway facilities, at from 2 shillings and upwards. Freight rates to Europe vary from

8 shillings would be 15 Pastoral In millions of Sheep were the Lincoln ority, the fl or cross Lin attended B houses in B for the clip home mari alive, or to "estancia" shillings d Hereford, cows. Exp in Buenos A A large bu output to t Ordinary s establishm dried meat laboring po Horses and former, C Hackney, the British taken 800 f siderable n —The natu a large zon peculiarly Best inside thousand tending as good graz Government is as yet f finds read with the similar in of the Me not approa clear and p ended thro except to t and autum Alfalfa (lu of two and zones suita moist sand is of wond the same p gives four carries 4.0 (6,178 acres the crops they come damage. the locust, siderable d to the loss means of country, a to minimi means, sho this city h from the t to study destruction Argentin

Preparat

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[1. In o early sowi advise gar seed-bed a use of cul sharp-toot fear that rotted soc cultivator fill furrow metallic r not think when the would be.

READER of your re soy beans tario; also what price [Soy b plots at th suitable fo crop, how varieties the north they did vetches. seed hous \$1 per pec

8 shillings to 20 shillings per ton, a fair average would be 15 shillings; to the States slightly higher. **Pastoral Industry.**—The country has some ninety millions of sheep and twenty million head of cattle. Sheep were until of late years mostly Merinos, but the Lincoln type having demonstrated its superiority, the flocks are now in great measure Lincoln or cross Lincoln. The wool markets here are well attended by German and French buyers with houses in Buenos Aires, or who come out expressly for the clip. Many breeders export direct to the home markets. Wethers sell readily for export alive, or to the freezing companies. Prices on the "estancia" (breeding establishment) run from 14 shillings downward, shorn. **Cattle.**—Shorthorn, Hereford, Polled Angus, and crosses from grade cows. Export steers realize from £6 to £7 placed in Buenos Aires, from 600 kilos (1,320 lbs.) upwards. A large business is done with England; smaller output to the Cape and Brazil in lighter animals. Ordinary steers go to the "saladeros" (killing establishments) at £3 10 shillings and upwards, the dried meat (tasajo or charque) being shipped to the laboring populations of Brazil and the West Indies. **Horses and Mules** are bred in great numbers; the former, Clydesdale, Shire, Percheron, Carriage, Hackney, and Racing. These are also exported, the British Remount Commission having lately taken 800 for the Cape. Mules are exported in considerable numbers to the Cape and Brazil. **Grazing.**—The natural grasses of the country, representing a large zone of the South American continent, are peculiarly adapted for breeding and fattening. Best inside runs would find buyers at ten to fifteen thousand pounds the league. To the south, extending as far as the Strait of Magellan, fair to good grazing lands can be acquired from the Government at from 9d. an acre. **Dairy Produce** is as yet in its infancy, but the butter produced finds ready sale in the English market on a parity with the produce of other countries. **Climate** is similar in most respects to the northern seaboard of the Mediterranean. In summer the heat does not approach the tropical, in winter the days are clear and bright. Work never requires to be suspended throughout the year. Snow is not seen, except to the south and near to the Andes. Spring and autumn provide a climate hardly to be equalled. **Alfalfa** (lucerne).—This rich feed grows to a height of two and a half feet, its roots penetrating in the zones suitable to its growth till they encounter the moist sand below the surface stratum. The plant is of wonderful virility; we know of estates where the same plants have grown for fourteen years. It gives four to five cuttings a year, and for grazing carries 4,000 head of cattle to the square league (6,178 acres). **Locusts.**—The climatic influences on the crops are only relative, the late frosts, when they come, not doing more than a percentage of damage. The country suffers from the invasion of the locust, a pest which in past years has done considerable damage. The Government has awakened to the losses suffered by the agriculturists, and by means of committees established all over the country, and liberal votes of money, is endeavoring to minimize the damage which, with vigorous means, should yearly grow less. The merchants of this city have also united, and have brought out from the United States a renowned entomologist to study the locust and devise means for its destruction. **ARGENTINE REPUBLIC.**

Preparation for Spring Wheat — Metallic Roofing.

SUBSCRIBER, Simcoe Co., Ont.:—"Last fall I plowed down several acres of clover, but could not plow the land the second time on account of the heavy rains. I wish to sow it with spring wheat; would you advise gang plowing in the spring as a preparation for that crop? 2. In preparing sod land for peas, do you recommend gang plowing across the furrows on land which has been plowed in the fall? 3. Is metallic roofing and siding suitable for a dwelling house, or would it attract the heat of the sun too much?"

[1. In order to get a good crop of spring wheat early sowing is very desirable, and we would not advise gang plowing in the spring, but prepare the seed-bed as early as the land is fit to go on by the use of cultivator or disk harrow, or both, and a sharp-toothed diamond harrow. 2. We should fear that the gang plow would turn up the unrotted sod and would prefer to use spring tooth cultivator or disk and harrow across the ridges to fill furrows. 3. We should not hesitate to use metallic roofing for the reason assigned, and do not think the attraction of heat would be great when the siding is painted, as we presume it would be.]

Soy Beans for Forage.

READER, Renfrew Co., Ont.:—"Can you or any of your readers give me any information regarding soy beans as a forage crop for pasture, etc., in Ontario; also where the seed can be procured and at what price?"

[Soy beans have been grown successfully in plots at the Experimental Farm, Guelph, to a stage suitable for forage. They are very uncertain as a crop, however, so far north, and only the earliest varieties will ripen in Ontario, and that only along the north shore of Lake Erie. At Guelph when they did their best they were no better than vetches. The seed can be procured from the large seed houses in Western Ontario, and costs about \$1 per peck.]

To Prevent Horns Growing.

J. H., Auburn, Ont.:—"Is there any way of preventing horns from growing on calves that would not be so dangerous and painful as dehorning when older. Several persons have lost animals by bleeding. I had three that bled badly last year; had to tie on dry flour to stop it. Is it more dangerous to clip them close to the head?"

[Horns can be prevented from growing on calves by applying caustic potash to the little "nubbins" of horn when the calf is a few days old. Wet the little horn and rub with a stick of potash, which you can get from the druggist for a few cents; make a second application a few days later if necessary. This method is undoubtedly effective, and causes but little if any pain if the operation is done carefully and the caustic is not allowed to touch the skin. There are very few losses from dehorning if the work is properly done. It is safer and less painful to clip the horns close to the head, about a quarter of an inch below the junction of the hair.]

Evaporator for Potatoes.

T. C., Vancouver Island, B. C.:—"I have 100 tons of potatoes to dispose of and wish to cater to the Klondyke trade. Do you know of any machine for evaporating potatoes on a cheap scale?"

[The G. H. Grimm Manufacturing Co., 84 Wellington street, Montreal, advertise in the FARMER'S ADVOCATE the Champion Fruit Evaporator for the evaporation of all kinds of fruit and vegetables. In their circular of instructions for operating they say, "Potatoes should be first steamed or cooked enough so that the skin can be easily removed, then grated or granulated, and placed on the trays. The yield is from nine to twelve pounds to the bushel." In a letter they add: "So we understand it, Saratoga chips are not what is desired for this purpose, as they are even more bulky than the raw potato and contain less nutriment, so that they would be far from desirable for a miner's diet."]

Classifying Sheep at Fairs.

SUBSCRIBER, Wellington Co., Ont.:—"In classifying sheep on a prize list, where, owing to lack of funds, prizes are not given for all three breeds, viz., Leicester, Lincoln and Cotswold, whether, in your opinion, would it be better to class the Leicester and Lincoln together and have the list read Leicester or Lincoln, or class the Cotswold and Lincoln together and read Cotswold or Lincoln?"

[We should say in such case the better classification would be the grouping of Leicesters and Lincolns, for the reason that, in our opinion, they are more nearly of the same type, and, from our observation, we conclude that they "nick" better in crossing with each other than does the Cotswold with either of the other breeds named.]

Seed Grain Wanted.

SAMUEL F. REDMOND, Peterboro Co., Ont.:—"I wish to enquire through the medium of your paper where I could purchase the following: Bart Tremend spring wheat and Mandcheuri barley."

[We frequently receive inquiries like the above, especially for varieties of grain that have stood well in the Ontario Experimental Union tests, and would point out that persons having such for sale would doubtless reap a rich harvest of sales by placing what they have on the market through our advertising columns.]

Percheron Stallion Wanted.

W. A., Cardwell Co., Ont.:—"Will you kindly send me the address of firms that have Percheron stallions for sale, as I want to get one as well-bred as can be had."

[Parties having such stock for sale may find it to their advantage to advertise the same in the FARMER'S ADVOCATE.]

How Many Pounds of Milk Per Day?

S. P., Temicouata, Que.:—"Please let me know how many pounds of milk a grade Ayrshire must yield daily to be called a good cow?—how many to be called an extra good cow?"

[A good cow of that class ought to give 35 lbs. per day when fresh and on good feed. An extra good one should give 45 lbs. under same conditions. A good cow should give 6,000 lbs. in a year.]

MARKETS.

Montreal Markets.

Export Cattle.—The stiff, strong prices at which drovers hold all cattle which would at all suit for the export trade practically kills anything of that nature, as exporters find it preferable to buy Chicago cattle, although higher in price, to fill their space, especially as they claim there is more difference in the quality of the cattle than in the price between the two, so that the only export demand is for an occasional few to fill a balance of space, for which all the way from 3½c. to 4½c. per lb. is paid.

Butchers' Cattle.—Owing to the extremely light runs of stock since the holiday markets, drovers have succeeded in getting their own figures for their cattle, and on Monday's market (Jan. 10) succeeded in again propelling prices up another quarter of a cent. Especially so is this the case where real prime beefs are offered. The drovers know how the market stands and hold out for good long prices, which they invariably obtain. Butchers are now commencing to growl, as prices have been away down for such a length of time that they find it extremely difficult to get their custom-

ers willing to pay an additional price for their beef, and unless they can obtain this from the public they lose plenty of money. It is, however, hardly as bad as they wish to make it appear. Good to choice beefs range in value from 4½c. to 4½c. per lb.; fair to medium, 3½c. to 4c., and common down as low as 2½c. per lb.

Sheep and Lambs.—So very few sheep and lambs are now brought in alive that to call it a market is somewhat astray, but, nevertheless, there are plenty of butchers quite willing to give the difference in price between the live and frozen to keep up a good demand. Such a demand strengthened the market on Monday fully ½c. per lb. on lambs and ¼c. on sheep, the former selling from 4½c. to 5c. per lb., and the latter 3½c. to 3½c. per lb.

Dressed Meats.—The early setting in of good, steady weather has been a bonanza for dressed meat handlers, as from the very start business has been very brisk in all lines, it being a difficult matter to cull out any one branch and say it was better than the other. Dressed hogs in the first half of last week on short supplies took a jump of a ½c. per lb., but brought them down again in the latter part of the week. Dressed lambs and mutton are good sellers, and good prices are obtained for nice bright goods. For the Christmas trade the amount of poultry turned over was enormous for this market. This, of course, has now fallen to a normal but fairly active demand. For these goods quotations are about as follows:

Hogs, light and bright, in cars	60 to 65
" light and bright, small lots	60 to 65
" light, heavy, small lots	60 to 65
Lambs	60 to 70 per lb.
Mutton	50 to 55
Beef, hinds	5½ to 7½
" fronts	3½ to 4½
Poultry, turkeys	8½ to 9½
" geese	7 to 7½
" ducks	7½ to 8
" chickens	5 to 8

Hides and Skins.—A strong up-bill fight in this branch of trade has kept prices very strong and always upward, until now tanners are dropping out, complaining that the difference between the green hides and manufactured goods is altogether too great. This at the present prices ruling—10c per lb. to the tanner—does not seem at all unlikely, but their dropping out does not seem to have any effect on the market whatever, for as fast as they stop the Ontario tanners step up and take all available hides, so that the way it looks now is that the Quebec tanners will simply have to quit the business or pay full prices for what they require. They cannot break the price any. Green hides—No. 1, 9½c. to 9½c.; No. 2, 8½c. to 8½c. Bull hides, 7½c. to 7½c. Calf skins—For No. 1, 8c. per lb.; No. 2, 6c. Lamb skins, 90c. to \$1. Horse hides, \$2 to \$3 each for No. 1.

The British Markets.

A decline of a ½c. to ½c. in London and Liverpool a week ago Monday was maintained this week on cattle, choice States steers making 11c.; Canadians, 10c.; Argentines, 9½c., a decline of ½c. from a week ago. Sheep were strong and advanced a full cent per lb.; Canadians, 11c.; Argentines, 11½c. per lb. sinking the offal.

Toronto Markets.

The abattoir at the Western cattle market commenced operation this week, killing over 100 head. The first shipment has just been made, and the proprietors are disappointed at the apathy displayed by the refusal of the Government to appoint a deputy meat inspector. They state that all meats are passed in the United States for export are examined by an officer appointed by the Bureau of Animal Industry, and that the success of the large packing houses in Chicago is mainly due to this inspection. The cattle are inspected previous to killing, and the meat is branded or marked with the Government certificate of its freedom from disease previous to shipment. They cannot understand why so simple a request can be refused, as the expense is only nominal and is the very least that they can do to foster the dead meat trade, so very desirable under our present conditions. The live cattle export business has been very unprofitable in the last few years, and it is doubtful if any of the older hands will again be seen in the business.

Export Cattle.—The demand was steady for this class. Prices ruled 4c. to 4½c. per lb. Mr. H. A. Mullens has returned to Winnipeg to look after the interests of the firm there. His partner, Mr. Joseph Wilson, reports that the prospects for Manitoba cattle are not promising just now. There were a large number of Manitoba and Northwest cattle exported last summer, and it is likely that the traffic will increase during the ensuing season. As a class the prairie cattle are of fine quality, and would sell better in the Old Country if they did not shrink so much during their long journey to the seaboard.

Butchers' Cattle.—The butchers did not attend in large numbers this week, only fifty loads of cattle on sale. Prices are a good deal firmer than for some time past. Holders are not keen at parting, except at their own figures. A few head sold at 4½c. per lb.; the general run of cattle sold for 3c. to 3½c. per lb. Prices were \$1 per cwt. better than they were a year ago.

Bulls.—A number of bulls were on sale to-day; it looked as if the farmers were parting with all their stock bulls. There was a good enquiry for fat bulls at 3c. to 3½c. per lb. C. Zeagman sold two export bulls at \$3.50 per cwt.; two steers, weighing 1,100 lbs. each, at \$3.00.

Stocks and Hogs.—Light stockers sell at from \$2.80 to \$3.25 per cwt. No enquiry for feeders. W. Crealock bought twenty light yearlings, at \$2.75 per cwt.

Calves.—Where are all the calves! None on the market to-day. Veals wanted and good prices offered for the right kind. Prices ruled \$2 to \$3 per head.

Milk Cows.—In good demand; about one dozen on sale; all sold readily at from \$25 to \$45 per head.

Hogs.—On the up-grade; prices advanced fully a ½c. all round; market steady; prospects good; demand active. Choice selections sold at 5c. per lb.; light, thick and fat hogs at \$4.50 to \$4.75; stores in good demand; fetch about the same figure as the light—\$4.40 per cwt. Sows for breeding purposes are in good demand, at from 3c. to 3½c. per lb. Stags are quiet, at 2c. The prospects for the hog trade are very good. We look for higher prices next week.

Lambs.—Steady, at from \$4 to \$4.50 per 100 lbs. Choice lamb—wanted.

Sheep.—Export sheep are quoted at 3c. to 3½c. per lb.; bucks sell at 2½c. per lb.

Dressed Hogs.—Not active; values hold steady; prices are advancing. Sellers are asking a little higher prices than the packers are willing to concede. Choice lightweights, in car lots, are quoted at \$6.10 per cwt.; packers offer \$6. Heavyweights are quoted at \$5.75 to \$5.85. Local butchers are paying \$6.50 for small, bright hogs. Vancouver and Victoria are enquiring for car lots.

Eggs.—Trade active and prices firm. Lined eggs sell at 13½c. per dozen; cold storage at 12c. to 14c. per dozen. Strictly new laid, reliable, anything from 18c. to 25c. per dozen. We saw a remarkable instance in the St. Lawrence market last Saturday. One dear old lady asked 25c. per dozen for her eggs. Another close by was asking 18c. They were both equally good, but the first old dame, with a very sly chuckle, said they take my word.

Hides.—The hide market is quiet; not usual at this season of the year. The wool warehouses are practically empty, owing to the good domestic and U. S. demand. Hides—No. 1 Green, 9c.; No. 2, 7c.; No. 1, cured, 9½c. per lb.

Wheat.—The grain trade was active. Wheat and peas advanced 1c. per bushel. No. 2 wheat, red, sold at from 82c. to 83c.; No. 2 white, 81½c. to 82c., and goose at 78c. per bushel; Manitoba, No. 1 hard, sold at 84½c. per bushel.

Millfeed—Steady; bran is quoted at \$8 per ton, and shorts at \$9 to \$11 per ton.
Barley—No. 1 quoted at 37c., and feed at 23c. to 29c.; single cars of fancy old barley sell at 40c. The trade prospects for the new year are exceptionally good.

Chatty Stock Letter from Chicago.

Following are the current and comparative prices for the various grades of live stock:—

Table with columns for CATTLE, HOGS, SHEEP, and various grades (e.g., 1500 lbs. up, 1350 @ 1500, etc.) and prices for different periods (Two weeks ago, 1896, 1895).

The new year opened with a very healthy tone in the general trade, and live stock men have reason to look for a prosperous and happy twelve months. Chicago's receipts for the year so far show a small decrease of cattle, a marked increase of hogs, and a slight decrease in sheep, compared with a year ago.

People are very much interested in learning the extent of cattle feeding for winter and spring markets, and exact information is very difficult to get. The following shows the details of a week's purchase of cattle in Chicago for export alive: Blachere, 158; Reeder, 477; Armour, 523; Sherman, 518; Doud & Keefe, 600; P. E. Schwartzchild, 452; Williams & Hall, 125; McIntosh, 45; Shambert, 613; Gilchrist & Munro, 100; Swift, 616; Hathaway, 603.

Table titled 'LARGEST RECEIPTS OF STOCK IN ONE DAY', 'LARGEST RECEIPTS OF STOCK IN ONE WEEK', 'LARGEST RECEIPTS OF STOCK IN ONE MONTH', and 'LARGEST RECEIPTS OF STOCK IN ONE YEAR'.

The sheep-men feel in very good spirits. They are getting big prices for wool and fair prices for beef at the markets. The horsemen are happy, or would be if they had more good ones.



A DOCTOR OF THE OLD SCHOOL.

BY IAN MACLAREN.

"It's a' for the best, Patrick, an' ye'll see that in a while. A've kent fine that ma day wes over, an' that ye sud hae a younger man."
"Did that a' cud tae keep up wi' the new medicine, but a' hed little time for readin' an' nae for travellin'."

"Weelum, gin ye carry on sic nonsense any langer," interrupted Drumsheugh, huskily, "a'll leave the hoose; a' canna stand it."
"Ye'll see that in a while, Patrick, but we'll gae on wi' oor wark."

"Dinna mind me, Patrick, for a' expect this; but ye ken we're no verra gleg wi' oor tongues in Drumtochty, an' dinna tell a' that's in oor hearts."
"Ye'll see that in a while, Patrick, but we'll gae on wi' oor wark."

"Ma mither aye wantit this read tae her when she wes sober, an' Drumsheugh began, "In My Father's hoose are many mansions," but MaLure stopped him.
"Ye'll see that in a while, Patrick, but we'll gae on wi' oor wark."

"This night I lay me down to sleep, I pray the Lord my soul to keep, And if I die before I wake, I pray the Lord my soul to take."
He was sleeping quietly when the wind drove the snow against the window with a sudden 'swish'; and he instantly awoke, so to say, in his sleep. Some one needed him.

"We'll sune be hame noo; this is the black wood, an' it's no lang aifter that; we're ready for oor beds, Jess; . . . ye like a clap at a time; mony a mile we've gaed the-gither."

"Ye'll see that in a while, Patrick, but we'll gae on wi' oor wark."

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"I canna be, Drumsheugh," said Jamie, greatly excited. "Glen Urtach's steikit wi' sna like a locked door."

"Ye're no surely frae the Glen, lads," as the men leaped the dyke and crossed to the back door, the snow falling from their plaids as they walked.

"We're that an' nae mistak, but a' thocht we wud be lickit ae place, eh, Charlie? A'm no sae weel acquaint wi' the hill on this side, an' there was some kittle (hazardous) drifts."

"It was grand o' ye tae mak the attempt," said Drumsheugh, "an' a'm gled ye're safe."

"He cam through as bad himsel tae help ma wife," was Charlie's reply.

"They're three mair Urtach shepherds 'ill come in by sune; they're frae Upper Urtach, an' we saw them fording the river; ma cert, it took them a' their time, for it was up tae their waists and rinnin' like a mill lade, but they jined hauds and cam ower fine." And the Urtach men went in to the fire.

The Glen began to arrive in twos and threes, and Jamie, from a point of vantage at the gate, and under an appearance of utter indifference, checked his roll till even he was satisfied.

"Weelum MacLure 'ill hae the beerial he deserves in spite o' sna and drifts; it passes a' tae see hoo they've githered frae far an' near."

"A'm thinkin' ye can collect them for the minister noo, Drumsheugh. A'body's here except the heich Glen, an' we maunna luke for them."

"Dinna be sae sure o' that, Jamie. Yon's terrible like them on the road, wi' Whinnie at their head;" and so it was, twelve in all, only old Adam Ross absent, detained by force, being eighty-two years of age.

"It wud hae been temptin' Providence tae cross the mair," Whinnie explained, "and it's a fell stap round; a' doot we're laist."

"See, Jamie," said Drumsheugh, as he went to the house, "gin there be ony antera body in sicht afore we begin; we maun mak allowances the day wi' tae foot o' sna on the ground, tae say naethin' o' drifts."

"There's something at the turnin', an' it's no fouk, it's a machine o' some kind or ither—maybe a bread cart that's focht its way up."

"Na, it's no that; there's twa horses, ane afore the ither; if it's no a dogcart wi' tae men in the front; they'll be comin' tae the beerial."

"What wud ye see, Jamie," Hillocks suggested, "but it might be some o' thae Muirtown doctors? they were awfu' chief wi' MacLure."

"It's nae Muirtown doctors," cried Jamie, in great exultation, "nor ony ither doctors. A'ken thae horses, and wha's abint them. Quick, man Hillocks, stop the fouk, and tell Drumsheugh tae come oot, for Lord Kilspindie has come up frae Muirtown Castle."

Jamie himself slipped behind, and did not wish to be seen. "It's the respect he's gettin' the day frae high and low," was Jamie's husky apology; "tae think o' them fechtin' their way doon frae Glen Urtach, and tolling round frae the heich Glen, an' his lordship driving through the drifts a' the road frae Muirtown, juist tae honour Weelum MacLure's beerial."

"It's nae ceremony the day, ye may lippen tae it; it's the heert brocht the fouk, an' ye can see it in their faces; ilka man has his ain reason, an' he's thinkin' o' it, though he's speakin' o' naethin' but the storm; he's mindin' the day Weelum pued him oot frae the jaws o' death, or the nicht he savit the gude wife in her oor o' irribble."

"That's why they pit on their blacks this mornin' afore it was licht, and wrastled through the sna drifts at risk o' life. Drumtochty fouk canna say muckle, it's an awfu' peety, and they 'ill dae their best tae show naethin', but a' can read it a' in their een."

"But wae's me"—and Jamie broke down utterly behind a fir tree, so tender a thing is a cynic's heart—"that fouk 'ill tak a man's best work a' his days wi'oot a word an' no dae him honour till he does. Oh, if they hed only githered like this juist since when he was livin', an' lat him see he hedna laboured in vain. His reward hes come ower late, ower late."

During Jamie's vain regret, the Castle trap, bearing the marks of a wild passage in the snow-covered wheels, a broken shaft tied with rope, a twisted lamp, and the panting horses, pulled up between two rows of farmers, and Drumsheugh received his lordship with evident emotion.

"Ma lord . . . we never thocht o' this . . . an' sic a road."

"How are you, Drumsheugh? and how are you all this wintry day? That's how I'm half an hour late; it took us four hours' stiff work for sixteen miles, mostly in the drifts, of course."

"It was gude o' yir lordship, tae mak sic an effort, an' the hale Glen will be gratefu' tae ye, for ony kindness tae him is kindness tae us."

"You make too much of it, Drumsheugh," and the clear, firm voice was heard of all; "it would have taken more than a few snow drifts to keep me from showing my respect to William MacLure's memory."

When all had gathered in a half circle before the kitchen door, Lord Kilspindie came out—every man noticed he had left his overcoat, and was in black, like the Glen—and took a place in the middle with Drumsheugh and Burnbrae, his two chief tenants, on the right and left, and as the minister appeared every man bared his head—a hundred men such as for strength and gravity you could hardly have matched in Scotland standing out in picture-que relief against the white background, and he said:

"It's a bitter day, friends, and some of you are old; perhaps it might be wise to cover your heads before I begin to pray."

Lord Kilspindie, standing erect and gray-headed between the two old men, replied:

"We thank you, Dr. Davidson, for your thoughtfulness; but he endured many a storm in our service, and we are not afraid of a few minutes' cold at his funeral."

A look flashed round the stern faces, and was reflected from the minister, who seemed to stand higher. His prayer, we noticed with critical appreciation, was composed for the occasion, and the first part was a thanksgiving to God for the lifework of our doctor, wherein each clause was a reference to his services and sacrifices. No one moved or said Amen—it had been strange with us—but when every man had heard the gratitude of his dumb heart offered to Heaven, there was a great sigh.

After which the minister prayed that we might have grace to live as this man had done from youth to old age, not for himself, but for others, and that we might be followed to our grave by somewhat of "that love wherewith we mourn this day Thy servant departed." Again the same sigh, and the minister said Amen.

The "wright" stood in the doorway without speaking, and four stalwart men came forward. They were the volunteers that would lift the coffin and carry it for the first stage. One was Tammas, Annie Mitchell's man; another was Saunders Baxter, for whose life MacLure had his great fight with death; and the third was the Glen Urtach shepherd for whose wife's sake MacLure suffered a broken leg and three fractured ribs in a drift; and the fourth, a Dunleith man, had his own reasons of remembrance.

"He's far lighter than ye wud expect for sae big a man—there wasna muckle left o' him, ye see—but the road is heavy, and a' change ye after the first half mile."

"Ye needna tribble yersel, wright," said the man from Glen Urtach; "he'll be nae change in the carryin' the day," and Tammas was thankful some one had saved him speaking. Surely no funeral is like unto that of a doctor for pathos, and a peculiar sadness fell on that company as his body was carried out who for nearly half a century had been their help in sickness, and had beaten back death time after time from their door. Death after all was victor, for the man that saved them had not been able to save himself.

As the coffin passed the stable door a horse neighed within, and every man looked at his neighbour. It was his old mare crying to her master.

Jamie slipped into the stable, and went up into the stall. "Puir lass, ye're nae gaein' wi' him the day, an' ye 'ill never see him again; ye've hed yir last ride thegither, an' ye were true tae the end."

After the funeral Drumsheugh came himself for Jess, and took her to his farm. Saunders made a bed for her with soft, dry straw, and prepared for her supper such things as horses love. Jess would neither take food nor rest, but moved uneasily in her stall, and seemed to be waiting for some one that never came. No man knows what a horse or a dog understands and feels, for God hath not given them our speech. If any footstep was heard in the courtyard, she began to neigh, and was always looking round as the door opened. But nothing would tempt her as if she expected to be taken out for some sudden journey. The Kildrummie veterinary came to see her, and said that nothing could be done when it happened after this fashion with an old horse.

"A've seen it since afore," he said. "Gin she were a Christian instead o' a horse, ye might say she was dyin' o' a broken heit."

He recommended that she should be shot to end her misery, but no man could be found in the Glen to do the deed, and Jess relieved them of the trouble. When Drumsheugh went to the stable on Monday morning, a week after Dr. MacLure fell on sleep, Jess was resting at last, but her eyes were open and her face turned to the door.

"She was 'the wife he hed," said Jamie, as he rejoined the procession, "an' they luv'd ane anither weel."

The black thread wound itself along the whiteness of the Glen, the coffin first, with his lordship and Drumsheugh behind, and the others as they pleased, but in closer ranks than usual, because the snow on either side was deep, and because this was not as other funerals. They could see the women standing at the door of every house on the hillside, and weeping, for each family had some good reason in forty years to remember MacLure. When Bell Baxter saw Saunders alive, and the coffin of the doctor that saved him on her man's shoulder, she bowed her head on the dyke, and the bairns in the village made such a wail for him they loved that the men nearly disgraced themselves.

"A'm gled we're through that, at ony rate," said Hillocks; "the wae's wfu' taen up wi' the bairns, conseederin' he hed nae o' his ain."

There was only one drift on the road between his cottage and the kirkyard, and it had been cut early that morning. Before daybreak Saunders had aroused the lads in the bothy, and they had set to work by the light of lanterns with such good will that, when Drumsheugh came down to engineer a circuit for the funeral, there was a fair passage, with walls of snow twelve feet high on either side.

"Man, Saunders," he said, "this was a kind thocht, and rael weel dune."

But Saunders' only reply was this: "Many a time he's hed tae gang round; he might as weel hae an open road for his last ride at the mouth of the grave, the only blackness in the white kirkyard, Tammas Mitchell did the most beautiful thing in all his life. He knelt down and carefully wiped off the snow the wind had blown upon the coffin, and which had covered the name, and when he had done this he disappeared behind the others, so that Drumsheugh could hardly find him to take a cord. For these Drumsheugh could hardly find him to take a cord. For these were the eight that buried Dr. MacLure—Lord Kilspindie at the heuch, the landlord and Drumsheugh at the feet as his friend; the two ministers of the parish came first on the right and left; then Burnbrae and Hillocks of the farmers, and Saunders and Tammas for the plowmen. So the Glen he loved laid him to rest."

When the bedroll had finished his work and the turf had been spread, Lord Kilspindie spoke:

"Friends of Drumtochty, it would not be right that we should part in silence and no man say what is in his heart. We have buried the remains of one that served this Glen with a devotion that has known no reserve, and a kindness that never failed, for more than forty years. I have seen many brave men in my day, but no man, and I pray that all doctors every where may share his spirit. If it be your pleasure, I shall erect a cross about his grave, and shall ask my old friend and companion Dr. Davidson, your minister, to choose the text to be inscribed."

"We thank you, Lord Kilspindie," said the doctor, "for your presence with us in sorrow and your tribute to the memory of William MacLure, and I choose this for his text: "Greater love hath no man than this, that a man lay down his life for his friends."

Milton was, at that time, held in the bonds of a very bitter theology, and his indignation was stirred by this unqualified eulogium.

"No doubt Dr. MacLure hed mony natural virtues, an' he did his wark weel, but it was a peety he didna mak mair profession o' religion."

"When William MacLure appears before the Judge, Milton," said Lachlan Campbell, who that day spoke his last words in public, and they were in defence of charity, "He will not be asking him about his professions, for the doctor's judgment has been ready long ago; and it is a good judgment, and you and I will be happy men if we get the like of it."

"It is written in the Gospel, but it is William MacLure that will not be expectin' it."

"What ist, Lachlan?" asked Jamie Soutar, eagerly. The old man, now very feeble, stood in the middle of the road, and his face, once so hard, was softened into a winsome tenderness.

"Come ye blessed of My Father . . . I was sick, and ye visited Me."

[THE END.]

Advice to Dyspeptics.

(With apologies to Rudyard Kipling.)

The heathen in his folly eats anything that's good, He doesn't try to choose the food that Science says he should. He dies, gray-haired and weary, at fourscore years and ten; And what most sorely vexes him is that he can't eat then.

So be wise and keep from pickles, from sauces and from spice, And keep away from cabbage and from beans and peas and rice. Never eat a thing that's sweet, and always eat it cold, And thus you'll save your intellect from growing stale and old.

Keep away from breakfast, keep away from tea, Keep away from lunches wherever you may be. Never let your midday meal be either large or small; Indeed, it's wiser very much to never eat at all.

—The Caterer, London, Eng.

A music committee advertised for a competent person to fill the office of organist, music teacher, etc. Among the replies received was the following: "Gentlemen,—I notice your advertisement for an organist and music teacher, either lady or gentleman. As I have been both for some years, I offer my services."

MINNIE MAY'S DEPARTMENT.

MY DEAR NIECES,—

By the time this reaches you the festive season will be over, and everybody and everything will have settled down once more to the old routine. I believe a great many of you will in a sense be glad to have it all over, for Xmas "brings good cheer," no doubt; but it also entails hard work on the housekeepers. They wish everything to be just as nice as possible, and rightly too; but they feel fatigued with the extra work and anxiety. Now is the chance to have a rest—I do not mean to sit around doing nothing—that is not resting, but just to take things a little easier till you feel better able for your duties once more. I wonder how many of you indulge in a rest after dinner. Did I hear some one say, "The idea! a farmer's wife or daughter taking a rest during the day!" Well, why not? Have you not earned it? Did you not get up early and work as busily as you could till noon, with not a moment of leisure? The idea! It is a very good idea. It will do you a world of good to lie down for say half an hour after the dish-washing is over, and, if possible, to take forty winks. Now, do not say that you cannot do it—that you have not time. Why, you will feel all the better for it, and will be refreshed and able for the duties which follow. Just you try it. It is not indulgence; it is an actual necessity. I think that we women do not take enough rest—we are so anxious to get so much done every day, and every day has its own duties. Some of us think it a waste of time to lie down during the day. I think it is a saving of time. We are not work-proof; our bodies will not stand the continual wear and tear forever, and will soon be used up if we persist in living at high pressure all the time. Nature will assert herself, and we shall be punished sooner or later by having to give up altogether, and then we shall have plenty of time to consider the error of our ways when we are laid aside. So I argue in this way: It is far cheaper in the long run, and it is a saving of time to lie down during the day and rest—to forget our duties for a little, and to give ourselves up to Morpheus for perhaps thirty minutes. We shall then be ready for the next thing, and feel all the brighter for the pause, and, shall I say it? better-tempered too—for when one's body is tired, one's temper suffers.

I have read somewhere that the Duke of Wellington could sleep at any hour of the day or night that he chose. Well for him that such was the case, for how could he have lived the life he did, or have gone through so many arduous duties? We are not all so fortunate as to be able to command the god of sleep at will; but surely we can all get eight hours' sleep out of the twenty-four. Some are so constituted that they can do with much less sleep. Humboldt in his youth never slept more than two hours at a time; but we do not all have such hardy constitutions as the old German philosopher. Ordinary mortals like us must have a proper amount of sleep if we are to perform our daily duties aright. You know the old rhyme—"Eight hours' work; eight hours' play; eight hours' sleep; and eight shillings a day." I am not at all sure about the eight shillings a day or the eight hours' play, but I know the most of us put in far more than this work, and far less than eight hours' of play. However, we can nearly all manage the eight hours of sleep.

There is another little thing I wish to speak of. Most of us women have a bad habit of standing at our work, when quite unnecessary, as there are a hundred and fifty things we could do just as easily sitting down. How many of you, for instance, sit down when you peel potatoes for dinner? Some one says, "Oh, I am in the way of standing now, and I don't mind it—it does not take long, and will not matter." Yes, it does matter. Too much standing is good for nobody, and I speak from experience. Lately I have been forcing myself to sit down to do certain duties at which I used to be careless enough to stand. I admit that it is force work at first, but the habit will be formed by and bye, and the body will be all the better for it, and will last longer. So spare your strength, my dear nieces, and do not waste it unnecessarily. Keep it for emergencies, and don't wear out before your time.

Now, some of you will say that Auntie has been preaching in this letter. Well, Auntie does not mind preaching if her sermon only leads to good results, and she will be amply rewarded if some wornout, overtaxed woman will only stop to read this little sermon, think it over, and decide to give a resting idea a fair trial. I think that that same woman will soon be able to say, "For the good advice contained in the ADVOCATE I have to thank—

MINNIE MAY."

She was an unsophisticated girl, and had been engaged as housemaid in the service of the Duke of Rutland at Belvoir. When she came she was thus instructed by the housekeeper: "Whenever you meet the duke, Alice, be sure to say 'Your Grace.'" The very next day, as the maid was going down the passage, the duke chanced to meet her. Immediately the girl drew herself close to the wall, closed her eyes, and, assuming a reverential attitude, said: "Lord, supply the wants of others, and make us thankful. Amen!"

The Foster Mother.

Very tender is the expression of solicitude on the face of the youthful "foster mother" as she patiently stands with the bucket of milk trying to induce the young calves to drink it. Dipping one hand in the milk, she puts her fingers to the calf's mouth and is delighted to see she can coax it to take a little in that way. Feeding them alternately in this manner, she soon finds them eager to take the nourishment she is so anxious to give them.

The "Foster Mother" is an admirable representation of a very pretty Normandy *paysanne*, whose close-fitting French cap is most becoming to the modest-looking little maid. The *sabots*, according to our Canadian ideas, are more useful than ornamental, but they are dear to the hearts of the French peasants, the sound of their noisy "click, clack" being music to their ears.

"Oh! the rush of the tripping feet; oh! the lightsome hearts that beat;
Wild and sweet the merry tune of the clang of the wooden shoon.

Still I see them on the pier, all the kindly faces near,
Hear the wild and merry tune of the clang of the wooden shoon.

Oh! the clang of the wooden shoon; oh! the dance and the merry tune,
Happy sounds of a bygone day which ring in my heart for aye.

Household Economics Clubs.

In the FARMER'S ADVOCATE of Jan. 1st "J. M." presents a plea for the formation of "Farmers' Reading Circles," and suggests that the ladies read conjointly such subjects as "domestic economy or horticulture."

The writer begs leave to second this suggestion with the warmest approval, and also to offer for the use of the "Reading Circles" a course of reading outlined by the "Cooking School Teachers' League." At a convention held by this League at Chautauqua a Canadian farmer's daughter requested that a committee be appointed for this purpose, with a view to helping especially those in rural districts who are of necessity denied the advantages of domestic science schools or lectures on household economics. This committee had the assistance of an advisory board of seven prominent lecturers, physicians and professors of domestic science in agricultural colleges. So that it is with confidence we recommend the course of reading they have arranged with so much care.

This domestic science course is included in the Chautauqua system of education, that those who wish to take examinations and secure certificates may do so by paying the regular Chautauqua Circle fee of fifty cents. Circulars are to be placed in the hands of each Farmers' Institute secretary, and will be sent free to all who apply to the "Central Chautauqua Office," Buffalo, N. Y.

Where there is already in existence a woman's club or a W. C. T. U. this study could be taken up as a branch of their work. Where no such organization exists it is hoped that Household Economics Clubs will be formed for the purpose of studying all that pertains to the well-being of the home and its surroundings. Though this outline of work covers two years, it may be spread over a much longer period and additional books introduced from a list of references which is published in the circulars; also local physicians or teachers might be asked to give a talk or a lecture on some special subject bearing on this work. A reference library containing the best works available on these subjects would be a helpful institution, and might be made a goal of striving for ambitious Household Economics Clubs.

It is the aim of the National Household Economics Association to seek to have this study introduced in all women's clubs, public schools, agricultural colleges and all training schools, wherever "home-makers" can be reached and benefited.

MARY E. MILLAR.

Reading Courses in Domestic Science.

FIRST COURSE.

- Physiology.*
- Physiology for Beginners; Foster & Shere; 75c.
- Chemistry of Foods and Cooking.
- Food and Its Functions; James Knight; \$1.
- Food Adulterations.
- Food Materials and Their Adulterations; Ellen H. Richards; 75c.
- Sanitation.
- Home Sanitation; Ellen H. Richards and Marion Talbot; 25c.

The Invisible World.

- Story of the Bacteria; 75c.
- Dust and Its Dangers; 75c.
- Drinking Water and Ice Supply and Their Relations to Health and Disease; Mitchell Prudden, M. D.; 75c.
- Primer of Hygiene; Ernest S. Reynolds; 35c.

SECOND COURSE.

- Chemistry of Cleaning.*
- Chemistry of Cooking and Cleaning; E. H. Richards and S. Maria Elliott; 50c.
- Study of Plant Life.*
- The Essentials of Botany; Charles E. Bessey, Ph.D.; New Edition; \$1.25.
- Hygienic Dress.*
- The Well-Dressed Woman; Helen Ecob; \$1.
- Home Nursing.*
- Emergency Notes; Glentworth R. Butler; 50c.
- Home Decoration.*
- The House Comfortable; Agnes Bailey Ormsbee; \$1.

[NOTE—Miss Mary E. Millar, Millar's Corners, Ont., will be pleased to help any of our readers who require assistance in the formation of Economics Clubs (or economic departments in other organizations) provided the inquirers in all cases enclose stamp for reply, as this work is entirely gratuitous.—MINNIE MAY.]

THE CHILDREN'S CORNER.

The Griffin and the Minor Canon.

Over the door of an old church, in a far-away land, there was carved in stone the figure of a large Griffin. It had a large head, with enormous open mouth and savage teeth; from its back arose great wings; it had stout legs in front, but there were none behind, the body running out into a long and powerful tail, finished off at the end with a



THE FOSTER MOTHER.

barbed point. A long, long distance from the town, in the midst of dreadful wilds, there dwelt the Griffin whose image had been put up over the church door. Now, this Griffin had no idea how he looked. He had never seen a mirror, and, being the very last of his race, he had never seen another Griffin.

At last, being very anxious to know what he looked like, he determined to go to the old church and see for himself what manner of being he was. So he started off and flew on and on until he came to the suburbs of the town, alighting in a green meadow by the side of the brook.

The news of his coming spread quickly over the town, and the people, frightened out of their wits, fled to their houses and shut themselves up. The Griffin called loudly for some one to come to him, but the people were all the more afraid. At last he saw two men who were hurrying home through the fields, and in a terrible voice commanded them to stop. Not daring to disobey, the men stood trembling.

"What is the matter with you all?" cried the Griffin. "Is there not a man in your town who is brave enough to speak to me?"

"I think," said one of the men, his voice shaking with fear, "that—perhaps—the Minor Canon—would come." "Go, call him, then!" said the Griffin; "I want to see him."

The Minor Canon had just finished the afternoon service in the old church, and was coming out with three aged women who had formed the week-day congregation. He was a young man of a kind disposition who visited the sick and the poor, and taught a school composed entirely of the bad children in the town with whom nobody else would have anything to do. Whenever the people wanted something difficult done for them, they always went to the Minor Canon. Thus it was that the

laborer thought of the young priest when he found that some one must come and speak to the Griffin.

The poor fellow would rather have had his head cut off than face an angry Griffin; but he felt that it was his duty to go, for it would be a woeful thing if injury should come to the people of the town because he was not brave enough to obey the summons of the Griffin.

"Well," said the Griffin, as soon as the young man came near, "I am glad to see that there is some one who has the courage to come to me."

The Minor Canon did not feel very courageous, but he bowed his head.

"Is this the town," said the Griffin, "where there is a church with a likeness of myself over one of the doors?"

The Minor Canon looked at the frightful creature before him and saw it was, without doubt, exactly like the stone image on the church.

"Yes," he said, "you are right."

"Well, then," said the Griffin, "will you take me to it? I wish very much to see it."

The Minor Canon was afraid that the people would be frightened to death, so he suggested that it was nearly dark, and that it would be wiser to wait till morning.

"That will suit me very well," said the Griffin. "I am tired, and I will take a nap here on this soft grass, while I cool my tail in the little stream that runs near me. The end of my tail gets red-hot when I am angry or excited, and it is quite warm now. So you may go, but be sure and come early to-morrow morning, and show me the way to the church."

The Minor Canon hurried away, and found a crowd of people waiting in front of the church to hear his report of the interview. When they found that he had not persuaded the Griffin to go away, but was actually going to bring it into the town, they were very angry. Some of them tried to destroy the stone Griffin so that there would be no excuse for the real Griffin to enter the town. The Minor Canon said that this would enrage the creature beyond measure. But the people were so determined to break up the stone Griffin that the young man found that it would be necessary for him to stay there all night to protect it. Next morning he hurried away to the field where he had left the monster. Then he walked back, the Griffin flying slowly through the air at a short distance above the head of his guide. Not a person was to be seen in the streets, and they went directly to the front of the church, where the Minor Canon pointed out the stone Griffin. The real Griffin settled down in the little square before the church and gazed earnestly at his sculptured likeness. For a long time he looked at it. First he put his head on one side, and then he put it on the other; then he shut his right eye and gazed with his left, after which he shut his left eye and gazed with his right. Then he moved a little to one side and looked at the image; then he moved the other way. After a while he said to the Minor Canon: "It is; it must be an excellent likeness! That breadth between the eyes; that expansive forehead; those massive jaws! I feel that it must resemble me. If there is any fault to find with it, it is that the neck seems a little stiff. But it is an admirable likeness—admirable!"

The Griffin sat looking at his likeness all the morning and all the afternoon. The Minor Canon had been afraid to go away and leave him, but by evening the poor young man was utterly exhausted, and felt that he must eat and sleep. He frankly admitted this fact to the Griffin, and asked him if he would not like something to eat. He said this because he felt obliged in politeness to do so, but as soon as he had spoken the words, he was seized with dread lest the monster should demand half a dozen babies, or some tempting repast of that kind.

"Oh, no," said the Griffin, "I never eat between the equinoxes."

[TO BE CONTINUED.]

An English paper tells of a clergyman who had two curates, with the older of whom he was at swords' points. On being appointed to another living, he decided to take with him the younger curate, whom he liked, and when he came to preach his farewell sermon he chose as his text, "Abide ye here with the ass, and I and the lad will go yonder and worship."

It seemeth
Across to
And yet no
The home
They make
So close it
I think I
Come near
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We'd find
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More beaut

Restfulness
religion. In
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stands: "No
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perfection of
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this ideal sort

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Come out u
Is near the
Come, and u
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Where is th
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How hast th
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What if my
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THE QUIET HOUR.

"Beyond."

It seemeth such a little way to me Across to that strange country, the beyond. And yet not strange, for it has grown to be The home of those of whom I am so fond. They make it seem familiar and most dear As journeying friends bring distant countries near. So close it lies that when my sight is clear I think I see the gleaming strand; I know I feel that those who've gone from here Come near enough to touch my hand. I often think but for our veiled eyes We'd find that heaven right about us lies. I cannot make it seem a thing to dread When from this dear earth I shall journey out To that still dearer country of the dead And join the lost ones so long dreamed about. I love this world, yet I shall love to go And meet the friends who wait for me I know. I never stand beside a bier and see The seal of death set on some well-loved face But that I think, "One more to welcome me When I shall cross the intervening space Between this land and that one over there; One more to make the land seem fair." And so to me there is no sting in death, And so the grave has lost its victory. It is but crossing, with abated breath And white, set face, a little strip of sea To find the loved ones waiting on the shore— More beautiful, more precious than before.

Restfulness.

Restfulness is an attribute of the best sort of religion. In a certain sanitarium, not long since, we noticed on an invalid's door in the early afternoon a printed card which said: "Resting. Please do not knock." At once the thought came—there are some faces which bear upon them, very plainly stamped by long years of quiet trust, the words, "Resting so securely that you may knock as loud as you please without disturbing." Angry words, like stones, may dash against this door, but the inward peace abides unbroken. The furious rain of affliction may beat upon the panel, but still the repose is not destroyed. The rest remaineth in spite of all that men or devils can do. From out the tumult of the storm, where the whirl of clashing wills and the contention of divergent thoughts fill the air with discord, the steadfast testimony stands: "None of these things move me." Souls like these, which are "ever bright as noon" and "calm as summer evenings be," diffuse about them an atmosphere of heaven and bear loud witness, even when no syllable is spoken, to the overwhelming reality of divine grace.

Nor is there any lack of efficiency and vigor in such spirits, as is sometimes calumniously charged. At least there need not be. When the serenity is of grace rather than nature, or of principle rather than mere passive acquiescence, the efficiency is doubled rather than diminished. With no rattle or clatter of machinery, and without the waste or frustration of friction, swiftly, noiselessly the work is done, with so little apparent effort that it seems to do itself. This is the perfection of activity combined with the perfection of peace. The Church needs more Christians of this ideal sort.

What If.

What if my Lord should call for me to-night; If He should say, Come out, O soul, into the solemn night Along the spirit way; Come out unsandaled, for the holy place Is near the bound that mortal eye may trace; Come, and unshrinking meet me face to face. What if my Lord should stand and question me; If He should say, Where is the talent I entrusted thee One distant day? How blooms the plot of fallow ground I lent? How hast thou used the sun and rain I sent? How were the golden hours of spring time spent? What if my Lord should sternly speak to me; If he should say, Bring back to-night mine own with usury Since that far day, And show what fruit clings to the tender stem; Thine erring brothers whom all tongues condemn. What hast thou done in Christly love for them? Ah, if my Lord should stand with patient eyes And question me, Outside the flaming gates of paradise, With bended knee, With lips upon His nail-bruised feet close pressed, I could but moan: "I love Thee most and best. I think that I have failed in all the rest, Oh, pity me."

The Year Book of British Columbia, by R. E. Gosnell, of Victoria, Librarian of the Legislative Assembly and Secretary of Bureau of Statistics, has, by the kindness of the author, reached us. It is an exceedingly creditable production of 500 pages, replete with valuable information, cleverly compiled, and comprehensive in its scope. It includes an interesting historical review of the discovery and early settlement of the Province, the establishment of parliamentary institutions, the growth of responsible government, of judicial courts, of the municipal and educational systems, describes the physical characteristics, the forest wealth, the fisheries, agriculture, mining, sociological features, the trade and finance, and the railway enterprises of the Province. A chapter is added containing much special information respecting the Canadian Yukon, its alluvials, and the Northern Territory generally. It is an exceedingly useful publication, and is calculated to do good service in directing attention to the wonderful resources of the Pacific Province.

A Hygienic Home.

My wife and I are trying hard To live on healthful diet; We read the food chart by the yard, And run our kitchen by it; We've banished from our bills of fare All that such guides condemn; True hygiene is all our care, As planned and taught by them.

For breakfast, coffee is tabooed, Hot cakes and eggs forbidden, And milk, since it is oft imbued With germs profuse, though hidden; Bread is unwholesome, so is steak; Submissive to our lot, Oatmeal and graham gems we take, And drink boiled water, hot.

For dinner, soup will never do, And oysters typhoid nourish; Salads, entrees, and ices too, Are more dyspeptic flourish; Potatoes (by the last advice) Are poisonous we're told; We eat rare meat, chopped fine, with rice, And drink boiled water, cold.

For supper—some professors teach 'Tis best to go without it. But since discretion's left to each, We take our choice about it; On chicken, we fies, tea and cake, We are forbid to feed; But gluten wafers, cocoa (weak) And prunes, are all we need.

It grieves us much our friends to view So reckless in their diet; Our wholesome menu we pursue And beg of them to try it; But appetite's ungodly way Their nature so enthalls, We cannot get a guest to stay Within our healthful walls!

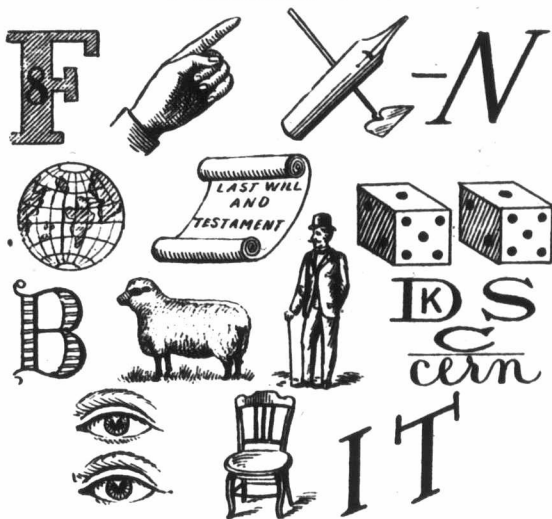
Don'ts.

"I'm tired of don'ts," said little Frank B. "Just as tired of don'ts as I can be; For it's don't do this and don't do that, Don't worry the dog, don't scare the cat, Don't be untidy, and don't be vain, Don't interrupt, don't do it again, Don't bite your nails, don't gobble your food, Don't speak so loud, it is dreadfully rude; Don't mumble your words, don't say 'I won't,' Oh! all day long it's nothing but don't! Some time or other I hope—don't you?— That some one or other will say, 'Please do!'"

Puzzles.

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

1-ILLUSTRATED REBUS.



LILY DAY.

2-BEHREADING.

Behread idle talk and leave price. Behread to oppress and leave outer coat. Behread to rave and leave an insect. Behread a particle of fire and leave enclosed ground. Behread to relax and leave want. Behread to chide and leave not warm.

ETHEL MCCREA.

3-

In each of the following, fill in the blank with a word concealed in its sentence:

- 1—Let each guest have some—
2—Eating some—will be effectual in satisfying hunger.
3—Nothing but terrible starvation could make one eat such—
4—Ah! a morsel of—will taste good.
5—Give me, I beg, good brown bread and some good cooked—
6—Don't take cold ham; eat some of this freshly-cooked, hot—
7—Stop! I entreat you! don't give the child any more—
8—What if I should eat more—
9—He has had quite enough—

4-DROP LETTER.

- 1—D-.a-s-., a famous explorer.
2—P-.r-.h-, a race of Egyptian kings.
3—C-.s-.r-, a race of Roman kings.
4—C-n-o-r-e-t-t-, an African country.
5—M-w-i-s-, a British Isle in the South Atlantic.

J. S. CRERAR.

5-BIRDS ENIGMATICALLY EXPRESSED.

- 1—A vessel and unsubstantial.
2—To plunder and a public house.
3—A mineral and a line.
4—To move quickly, a vowel, and part of a chain.
5—A fowl and part of an insect.
6—Part of a harness and a vase.

MAGGIE SCOTT.

6-CHARADE.

My first is a summons or demand; My second is to carve; My third is the indefinite article; My whole is a city in India.

MURIEL E. DAY.

7-TRANSPOSITION.

Uitrev noyl eakem rou lesbi lobew. Dan lal rou lweegkdon si seevrou ot okwn. MURIEL E. DAY.

8-ENIGMA.

In light but not in dark; In house but not in park; In short but not in long; In woods but not in lawn; In night but not in day; In straw but not in hay; In now but not in then; Total a city in Ontario. NELLIE FERGUSON.

9-TRANSPOSITION.

On samn barnol rof dogo si naiv. Huguot eh nliw, ton het nowro, utb teh sosro; Yoree sihw rfo nmas gods si a nagi, Ryeve utodfb fo nmas igna si a sola. ETHEL MCCREA.

10-SQUARE WORD.

- 1—A species of cake;
2—Used in counting;
3—3rd sing. of a verb;
4—Transposed means employment.

MABEL ROSS.

11-DROP LETTER PUZZLE.

- 1—-a-r-g-te, a town in England;
2—S-n-le-, a great explorer;
3—H- - - -x, a city of Canada;
4—M-e-ls-p-i, a long river;
5—N-a-a-, noted for a display;
6—-a-i-i-, a large body of water;
7—-l-nd- -e, a gold region;
8—A-b-a-y-, a river in Canada;
9—C- -a-, a large island;
10—-or- -an-, a city in United States;
11—G- -l-, a lake in Ontario;
12—Re-i-a-, a city in Canada.

NELLIE RENISON.

Answers to Dec. 15th Puzzles.

- 1-Hippotamus. 3-Apple, pear, fig, date, orange, peach.
2-B R O O M lime, grape, prune, shaddock.
N E R V E
P I A N O 5-No pleasure is comparable to the standing upon the vantage-ground of Truth.
S E N S E
G R E E N
4-M A C B E T H 6-Cantilever.
A P H E M I A 7-Lying's a certain mark of C H E A P E R cowardice, and when the B E A V E R S tongue forgets its honesty, E M P E A C H the hand and heart may T I E R C E L drop the function too, and H A R S H L Y nothing worthy be resolved or done.
8-Philadelphia.
10-P E D R O 9-At Christmas play and make good cheer.
E A R E D For Christmas comes but once D R A C O a year.
R E C U R
O D O R S

SOLVERS TO DEC. 15TH PUZZLES.

Ethel McCrea, "Hazel," "Kit," Maggie Scott.

PRIZE-WINNERS.

The following are the winners of prizes for solutions to puzzles in October, November and December:

1st prize (\$1), Miss Maggie Scott, Trent Valley Farm, Meyersburg, Ont.; 2nd prize (75c), Miss Agnes C. Scott, Oshawa, Ont.; 3rd prize (50c), Miss Edith Brown, Oakville, Ont. Several others followed very closely, especially Miss A. P. Hampton and Miss Mabel Ross.

For original puzzles during same period: 1st (\$1), Miss Agnes C. Scott ("Kit"), Oshawa, Ont.; 2nd prize (75c), Miss Muriel E. Day, New Carlisle, Que.; 3rd prize (50c), Miss Blanche MacMurray, Stirling, Ont. UNCLE TOM.

COUSINLY CHAT.

"Hazel."—Your request will be attended to. Come often. Nellie & Nellie.—Two new cousins whom we are glad to hear from, and hope they will remain with us. "Margaret."—You and "Kit" keep close together. I believe there is something clannish about you. Your Endless Chain is quite a novelty. "Muriel."—Why not send every two weeks? Tell the little "star" we need her light too. Did not hear from L—yet, are you snowed up 'way down East? W. G. M.—Lost in a blizzard, prairie cousin! Have not heard from you this time. "Kit."—You have been very successful. Why have you not sent more original puzzles lately?

A Seasonable Suggestion.

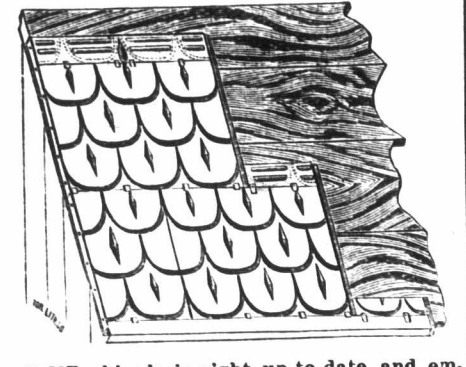
The other day two ladies sat near me in a tram car, and as one opened her purse to pay her fare a scrap of paper pasted on the leather was disclosed. "Is that your shopping list?" asked the friend beside her; "it doesn't look a long one." "No," was the reply; "it is not the list, but it is what keeps the list from being a long one." And she read: "He who buys what he does not need will soon need what he cannot buy." "What a capital guardian for your money! You must let me copy that for my leaky purse. Who wrote it?" "I don't know, I wish I did—for he has saved many a shilling from lightly rolling from my hands since I put it here." How true it is that we are ruined not by what we really want but by what we think we want; therefore, never go abroad in search of your wants. If they be real wants they will come home in search of you, for he that buys what he does not want will soon want what he cannot buy.

FISHING WITHOUT A HOOK . . .
Is not more hopeless than growing fruit without . . . **SPRAYING.**

In these days of close prices and competition, if one would succeed, the most approved methods should be adopted. A fruit-grower or farmer cannot afford to buy a new sprayer every year or so, nor can he afford to use nine-tenths of these shopworn appliances in the average hardware store. The dealer has put his money into these pumps, and he will get it out at the first opportunity (if you let him). His usual expression when offered our goods is: "I have no doubt but your SPRAYMOTORS are all right and are the best, but I will not buy any more spray pumps until I get rid of these I have on hand." The point is, do you know better than allow him to unload upon you? Poor, cheap, hard-working, short-lived pumps; have done more to discourage the practice of spraying than all other causes combined. The Government, through the Ontario fruit experimental stations, have decided for you, by actual public trial, what in their opinion is the best, and if you are wise you will trust to those who know, unless you have experience yourself. For us to win in actual contest against the best America can produce, is a feat of which we are very proud, but what is more to your liking, this very trial will save thousands of dollars to prospective purchasers, by preventing them from buying poor appliances, and consequent loss and distrust in their use. If you, as a prospective purchaser of a spraying apparatus, want to know more of the ALL BRASS, BALL-ACTING, MECHANICAL AGITATING, AUTOMATIC, SELF-PACKING, EVERLASTING SPRAYMOTOR, write us or call at the nearest agency or hardware and see for yourself. See our SPRAYMOTOR JR. If you only want a single-nozzle apparatus. It will paint in oil or water colors, will disinfect all fowl and other places, and will perform the best that money can produce. **FORM THE SPRAYING HABIT; IT PAYS. SPRAYMOTOR CO.,**
357 Richmond Street, London, Ont.
Send 3-cent stamp for our 1893 treatise on diseases of fruit trees, and their remedies. AGENTS WANTED.
Mention this paper.

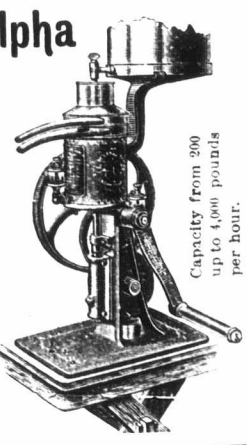


Pedlar Patent Steel Shingle
IS THE PROPER COVERING FOR BARN AND HOUSES.
"IT STANDS THE TEST."



OUR shingle is right up to date, and embraces all the desirable points found in all metal shingles. Catalogue sent on request.
THE PEDLAR METAL ROOFING CO.,
OSHAWA, ONT.
Larger and more progressive than all others combined.

De Laval Alpha Separator



The best and most durable manufactured.
FOR INFORMATION APPLY TO
The **CANADIAN DAIRY SUPPLY CO.,**
327 Commissioner's street,
MONTREAL, ONT.

FOR SALE AN IMPORTED COACH STALLION. 5 years old; a good stock getter. Will be sold cheap.
W. T. WHALE, Goldstone P.O., Wellington Co.

GOSSIP.

In writing to advertisers, mention the "Farmer's Advocate."
Messrs. Shore Bros., White Oak, Ont., Shorthorn breeders of long-standing reputation, place a new advertisement in our columns of some grand young shorthorn bulls and a few heifers.

Mr. John Davidson, Ashburn, Ont., is feeding some twenty odd head of dehorned steers in coase boxes, and is well pleased with the way they are doing. He is feeding ensilage, roots, cutstraw and a little mixed chop. A bunch that while tied would eat only six baskets full per day, very soon consumed nine or ten after being turned loose, and made corresponding gains.

At the sale of the herd of Shorthorns of Mr. Thos. Fielden, Grimston Park, England, last month, the highest English average for the year, \$302 each, for 19 head, was made. The cattle were mainly of Booth blood. The stock bull, Sir Sylvester Studley, was purchased by the Trustees of the Warlike estate at 60 guineas, and his ten months old son, Lord Studley, brought 109 guineas. The highest priced cow in the sale was Lady Heister Studley, bought by Mr. Chandos Pole Gell at 160 guineas (\$800).

Mr. John Isaac, Markham, Ont., announces in our advertising columns in this issue that he will sell by public auction, early in March, a dozen young imported bulls, aged from ten months to two years, which are now in quarantine, and which were selected by himself from the famous Collynie, Kinellar, and Upper Mills herds in Aberdeenshire, Scotland. A few home-bred bulls and a few choice females will also be sold at the same time. The offering of these young bulls will be of interest to Shorthorn breeders generally, as we believe it is conceded that there is need for an infusion of new blood, and from what we know of Mr. Isaac's judgment we have no doubt the animals are as nearly what is wanted as could be procured. We shall refer more particularly to individual animals in the offering and their breeding in our next issue.

The annual meeting of several of the breeders' associations of the State of New York were held in unison at Cornell University, Ithaca, N. Y., on Thursday and Friday, January 6 and 7. There were large representations of the members of the Jersey Breeders' Association, the State Sheep Breeders' Association, the Western New York Jersey Cattle Club, and the Cheshire Swine Breeders' Association. This large delegation of wide-awake breeders, supplemented by the students of the agricultural department of the University, made an ideal audience, and the different papers and addresses given received the close attention they deserved. The programme included the following: "The Ayrshire Cow," Frank Converse, Woodville; "The French-Canadian Cow," C. Colburn, Portlandville; "Breed vs. Feed as Factors in the Development of Domestic Animals," Frank D. Ward, Batavia; "Two Methods of Feeding Swine to Make 100 Per Cent Profit," C. E. Chapman, Portville; "Effects of Soil and Feed," Prof. Clinton, Cornell University; "The Jersey Cow," Valancey E. Fuller, New York City; "Breeding and Feeding to Produce High-Class Dairy Animals," F. S. Peer, Mount Morris; "Tuberculosis," Dr. J. S. Law, Cornell University. Officers were elected as follows: New York State Breeders' Association—President, Aaron Barber, Avon; First Vice-President, Frank D. Ward, Batavia; Second Vice-President, P. J. Cogswell, Rochester; Secretary-Treasurer, Wm. H. Chamberlain, Kanona.

MILLER & SIBLEY'S JERSEYS.
The presence of representative animals from the fine herd of Jerseys owned by Messrs. Miller & Sibley, Franklin, Pa., at the Toronto, London, and Ottawa Exhibitions last fall constituted a new feature in Canadian show-yard history in so far as this breed is concerned, since it was the first time our neighbors of the Republic did us the honor of measuring up with our Jersey breeders in the competition for prize honors. They came with a strong contingent, and in strong competition succeeded in carrying off the lion's share of the prizes, including the herd prize and the first prize for cow over three years, the sweepstakes for best bull any age at all three shows, and sweepstakes for best female at London and Ottawa, and gold medal for best herd at the latter show. The constitution of their animals is a point to which they attach great importance, and they breed large, strong cows, with a capacity for heavy work, and to this end they withhold the breeding of their heifers longer as a rule than other breeders, claiming that it is unjust to demand that the heifer shall develop greater than that of a cow of the breed, and in offering and her vitality that she needs herself while growing. The highest bona fide cash price ever paid for a Jersey animal (\$12,500) was paid by Miller & Sibley for Michael Angelo, son of Euros, whose butter record of 7784 pounds in 11 months 5 days was at that time the highest that had been made by any cow of the breed. Among the famous animals that have been owned in this herd is included Stoke Pogis 5th, for whom it is said \$15,000 was offered and refused. He has 24 daughters and 118 granddaughters in the list of cows testing fourteen pounds and upwards, the number of granddaughters being greater than that of any other bull. Matilda 4th and Ida of St. Lambert were also owned in the herd; the latter, having a record of 30 pounds 21 ounces in seven days, and 67 pounds of milk in one day, was the dam of Ida's Rioter of St. Lambert, sire of 24 cows tested for butter and averaging 20 pounds 21 ounces in a week, a higher average than has ever been made for a like number of daughters of any other bull, except Stoke Pogis 3rd, his double ancestor. Ida Marigold, the sweepstakes winner in the showing at the World's Fair, and of the largest share of the honors in the practical test, was a daughter of Ida's Rioter of St. Lambert, and was bred by Miller & Sibley. She later was sold and entered for the World's Fair, but sold before being shipped there. This firm has met with the success in the showing which would naturally be expected from the quality of their foundation stock and their methods taken to improve it, as is shown in their advertisement now running in this paper.

Consumption Cured.

An old physician, retired from practice, having had placed in his hands by an East India missionary the formula of a simple vegetable remedy for the speedy and permanent cure of Consumption, Bronchitis, Catarrh, Asthma, and all throat and lung affections, also a positive and radical cure for Nervous Debility and all Nervous Complaints, after having tested its wonderful curative powers in thousands of cases, has felt it his duty to make it known to his suffering fellows. Actuated by this motive and a desire to relieve human suffering, I will send free of charge, to all who desire it, this recipe, in German, French or English, with full directions for preparing and using. Sent by mail by addressing with stamp, naming this paper, W. A. NOYES, 329 Powers' Block, Rochester, N. Y.

Clydesdales!

We have several imported Clydesdales mares 8 and 10 years old for sale at moderate prices. Some of them in foal to Grandeur. An imported Hackney mare in foal to Square Shot. Also Ayrshire bull and Heifer.

Calves. Write for prices or come and see
D. & O. SORBY,
GUELPH, ONT.

Clydesdales for Sale.

1 Three-year-old stallion by imp. Queen's Own, out of imp. Candour, by Macgregor.
1 Three-year-old (imp.) stallion by Prince of Millfield, out of Connie Naira, by Prince of Wales.
1 Four-year-old stallion by King's Own, out of imp. Candour, by Macgregor.
3 Imp. two-year-old stallions by Macgregor.
2 Two-year-old stallions by Prince of Quality, out of imported dams.
Also several two-year-old fillies.
These animals are all large size, good quality and sound. Terms reasonable.

ROBERT DAVIES,
Thorncliffe Stock Farm, TORONTO, ONT.
BREEDERS OF HEAVY DRAFT STOCK.
FOR SALE!
A few well-bred heavy Clyde and Shire mares, 1600 to 1700 lbs., suitable to work a farm and raise a heavy draft colt.
HENDRIE & CO. (Limited),
TORONTO, ONTARIO.

Arthur Johnston,
Greenwood P. O. and Telegraph Office,

— OFFERS FOR SALE —
FIFTEEN SPLENDID YOUNG BULLS.
— ALSO —
Cows and Heifers,
As good as the old bull ever left.
Berkshires OF CHOICEST BREEDING AND QUALITY FOR SALE.
Send for Catalogue and prices. "No business, no harm," is our motto. Claremont C. P. R., or Pickering, G. T. R.

FIRST PRIZE WINNERS
Our 1896 Mammoth Poultry Guide of 100 pages mailed FREE! Something entirely new, tells all about poultry, how to be a winner, how to MAKE BIG MONEY. Contains beautiful lithograph plate of fowls in their natural colors. Send 10c for **JOHN BAUSCHER, JR.,** postage, Box 252, FLEETPORT, ILL.

Toronto Incubators
Best hatching machine built. Awarded silver and bronze medals. For circular, address—**T. A. WILLIAMS, 511 Dundas St., Toronto, Ont.**

ADVERTISE IN ADVOCATE

Dispersion Sale

OF SHORTHORNS, 23 head (16 cows and heifers and 7 young bulls); 15 head of Southdowns, and 8 Horses; also, farm implements, property of John Miller, Markham, Ont., on
WEDNESDAY, JANUARY 26th, 1898.
The farm is four miles from Markham, on G.T.R., and three miles from Locust Hill, C. P. R.
CATALOGUE ready January 10th, 1898.
Address—

JOHN MILLER,
MARKHAM, ONT.

Spring Grove Stock Farm

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

Shorthorns & Leicesters

Nominee, sweepstakes bull at Toronto, 1897, bred by us. We also won first prize on pen Leicesters bred and owned by exhibitor. We continue to breed the best.
YOUNG STOCK FOR SALE.
ST. HELEN'S,
E. Gaunt & Sons,
Lacknow Station, G. T. R., 3 miles. om

FOR SALE! Good Young Cows

two years old, yearlings and heifer calves out of imported and home-bred cows, and the imported bulls, Royal Member and Rantin Robin. Come and see them, or write, if you want something special.
H. CARGILL & SON,
Station on the farm, Cargill Sta. & P.O., Ont.

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

Telegraph office, Burlington Station, G. T. R.
BREEDERS Shorthorns, Shropshires, and Berkshires
Ten choice young bulls from 9 to 12 months, extra good quality, got by "Indian Statesman." A choice lot of yearling ewes (served by an imp. ram), due to lamb in March and April. Also eight young sows, due to farrow in March, and a few boars from four to six months old. Farms one-half mile and one and one-half from Burlington Station, G. T. R.

SHORTHORNS

Bulls and heifers, having gilt-edge pedigrees, and of superior quality.
C. A. BRODIE,
Bethesda P. O., Ont.

Willow Bank Stock Farm

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

THOS. ALLIN & BROS.

LAKE VIEW FARM, OSHAWA, ONT.
Breeders of SHORTHORN Cattle and SHROPSHIRE Sheep. 2 choice young bulls now for sale, also a few choice bred cows and heifers. Hard-times prices. Correspondence solicited.

Shore Bros., WHITE OAK, ONT.

Offer 6 young Shorthorn bulls of the low, easy-feeding sort which the present trade demands. Could also spare a few heifers.

Shorthorns & Berkshires

A few choice heifers and heifer calves for sale. Prices reasonable.
JOHN RACEY, Jr., Lennoxville, Que.
17-1-y-o

Shorthorn Bulls

FOR SALE. One ten months old, got by (imp.) Royal George, dam by (imp.) Warfare; the other, four years old, by (imp.) Warfare, dam (imp.) Charlotte, sire and kind; both red. Write for prices or come and see.
A. & D. BROWN, Iona, Ont.

MAPLE

ESTABLISHED 1854.
Choice Shorthorn of the year. Both milk and a few Leicester.

MAPLE LODGE

ber litters at v
Shorthorns
Meadowdale, bulls and a few. Also Berkshires breeding. Str from farm.

...FITZ

strong and s reasonable pr
E. JEFF & S.

SHORTHORN

At present we Southdowns a
OAK SHOR
Your choice including co having the pedigree. H bulls equally interested Shrop Berkshires swi
CAPT.

Hawthorn

For Sale ing and good
WM. GRAING

Samuel I

Pure-bred Sh hogs. Am no heifers for sal
FOR SALE.
HORN BULL some choice I
F. J.

POLLE

To make room we offer for pure-bred Pol Blackbird), 7 calves, 3 heif lot, but will lot, in fine cor good Ayrshire calves, three Write for price
ROBT. W. W. OGILVIE

AYRSH

6 Impor Bulls,
FIT FOR SERV
From the milking str
Terms reason
Robt. Davi
Thorncliffe St

AYRSH

TWO year in both imp sister to August c being draught Auchenbrain, 1897 (illustrate are by imp. C at Toronto, 18 ber calves, the ported, and an
THOS.
Neidpath Stoc Farm adjo

MAPLE LODGE STOCK FARM.

ESTABLISHED 1854. Choice Shorthorn bulls and heifers for sale now of the very best quality and breeding.

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



F. BONNYCASTLE & SONS, CAMPBELLFORD, ONT. Breeders of Shorthorns, Cotswolds, and Berkshires.

Shorthorns and Berkshires S. J. PEARSON & SON, Meadowvale, Peel Co., Ont., are offering young bulls and a few heifers, by British Statesman.

...FITZGERALD BROS....

Mount St. Louis, Ont., Breeders of pure Shorthorn cattle, the descendants of Crook-shank and other noted breeds, and Cotswold sheep.

E. JEFF & SONS, BONDHEAD, ONT. BREEDERS OF Shorthorn Cattle, Southdown Sheep, and Berkshire Pigs.

OAK PARK STOCK FARM'S SHORTHORN HERD Your choice from 50 head, including cows and heifers having the most approved pedigrees.

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

Hawthorn Herd of Deep-Milking Shorthorns For Sale! FOUR young bulls and several heifers of the choicest breeding and good quality.

Samuel Dunlop, EADY P. O., ONT., Breeder of Pure-bred Shorthorn cattle and Poland-China hogs.

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

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

POLLED ANGUS HERD.

To make room for our dairy herd of Ayrshires we offer for sale the entire herd of 14 head pure-bred Polled Angus cattle.

ROBT. HUNTER, Lachine Rapids, Que. W. W. OGILVIE, Proprietor.

AYRSHIRES FOR SALE

6 Imported Bulls, FIT FOR SERVICE. From the best milking strains. Terms reasonable.

Robt. Davies, Thorncliffe Stock Farm, TORONTO, ONT.

AYRSHIRE BULLS!

TWO yearlings, one whose dam and sire are both imported. The other's dam is a full sister to above-mentioned bull.

THOS. BALLANTYNE & SON, Neidpath Stock Farm, STRATFORD, ONT.

PRIZE-WINNING Ayrshires and Poultry FOR SALE

Choice young bulls fit for service, sired by Jock Morton, and from heavy milking dams, and a few young cows and heifers.

JAS. McCORMACK & SONS, 20-2-y-o Rockton, Ontario.

Ayrshires, Tamworths and Chesters. T. BROOKS & SONS, Box 86, Brantford, Ontario.

GLENGARY STOCK FARM.

My herd comprises the best strains procurable. Am now offering young bulls and heifers descended from the importation of the late Thos. Brown.

JNO. A. McDONALD, JR., Williamstown, Ont. 4-2-y-o

Choice AYRSHIRES

R. REFORD, Breeder and Importer. FOR SALE.--Young cows in calf to imported Napoleon of Auchebraun. Bull calves, sired by imported Glencairn 3rd.

Trout Run Stock Farm Offers two young Ayrshire bulls of the choicest breeding; B.P. Rocks, Black Minors, Buff Cochins and White Brahma fowls.

WM. THORN, Norfolk Co. LYNEDOCH, ONT.

BROOK HILL AYRSHIRES....

are still to the front. Two fine bull calves for sale. Orders taken for young stock. Speciality in bull calves. Correspondence solicited.

W. F. STEPHEN, Trout River, Que.

AYRSHIRE CATTLE.

KAINS BROS., BYRON, ONTARIO (London Station), now offer some choice females from prize-winning sires and dams, and of a strict business type.

AYRSHIRES FOR SALE. SIX choice young Bulls, one and two years old, by Earl of Percy.

BRAMPTON JERSEY HERD Offering high-class A. J. C. cows and heifers in calf, and heifer calves; choice young bulls. High-grade cows in calf, and Berkshires.

B.H. BULL & SON, Brampton

DON JERSEY HERD

Now offers FOUR young bulls, sired by Costa Rica's son. He has 75 per cent. of the blood of Merry Maiden, champion sweepstakes cow of all three tests combined at the World's Fair, Chicago.

DAVID DUNCAN, DON P. O., ONT. 9-1-y-o

WILLOW GROVE HERD OF JERSEYS.

Sweepstakes herd of 1893, 1894, 1895 and 1896. J. H. Smith & Son, Highfield, Ont., are offering 12 females, to calve shortly.

GLEN ROUGE JERSEYS.

WILLIAM ROLPH, Markham, Ont., offers twelve Jersey Bulls and Heifers (pure St. Lamberts), out of tested cows. Grand individuals. Prices right. 2-7-om

NOTICES.

The advantages resulting from dehorning cattle are so many and so far-reaching in their good effects that the day is likely to come when the cow with horns will be something of a curiosity.

"What are we going to do for wood, lumber, building material, etc., when the forests have passed away?" has been repeatedly asked, but so far as roofing material is concerned the problem is solved long before the dreaded occasion.

T. Hardy Shore, Glanworth, Ont., writes: "I have made the following sales since last report: 3 yearling rams to George Harding & Son; 2 yearling ewes to E. Bryant, Ridgetown; ram to T. McMichael, Seaford; ram lamb to S. Weld, Delaware; ram lamb to W. Malpass, Mossley; ram lamb to A. Ring, Muskoka; 2 ewes to E. Starkey, Glanworth; yearling ram, ram lamb, 2 ewes, 2 ewe lambs, to Sarnia Ranch Company; yearling ram and 8 ewes to Frank Harding, Wisconsin; 4 ram lambs to E. Corey & Sons, Utah.

Mr. F. S. Peer, Mt. Morris, N. Y., announces in our advertising columns that he sails for England and the Island of Jersey on the 29th inst., and will be pleased to accept commissions to import horses, cattle or sheep.

The Canada Salt Association, Clinton, Ont., announces that each of the exhibitions to be held this coming fall in the cities of Toronto, Montreal, Ottawa, and St. John, N. B., they will give a special prize of \$25, in gold, to the creamery or butter factory winning the exhibitor's prize for the best tub or box butter put up in the largest packages exhibited.

PLANET JR. FARMING UP TO DATE. Any one who thinks that farming is behind other occupations in enterprise and progressiveness has only to look through the new 1898 "Planet Jr." book, published by S. L. Allen & Co., to be undeceived.

JOHN MILLER'S SALE OF SHORTHORNS. The dispersion sale of the entire herd of Shorthorns owned by John Miller, Markham, Ont., on Wednesday, Jan. 26th, will be of interest to all admirers of the red, white and roan.

JOHN TREMAIN, FOREST, ONT., BREEDER OF HIGH-CLASS Holstein Cattle. The stock of which being purchased from the noted herds of B. B. Lord (Sincclairville, N. Y.) and H. Bolter (Cassell). Young stock of gilt-edge breeding for sale.

FOR SALE AT ONCE.

Two registered Holstein cows in calf, or will exchange for young Shorthorn bulls or heifers. Also Herrison's bearded wheat at \$1.25 per bu.

J. FRED DAVIDSON, PETERBORO, ONT. Box 903.

BROOKBANK HOLSTEINS. Champion milk and butter herd. Can sell a limited number of bulls and heifers one month old and up; some nice ones from our show herd. First come first served. Quality unsurpassed. Prices right. Write or come and see.

SPRING BROOK STOCK FARM.

Choice Tamworth pigs ready to wean, sired by the prize-winning imported boar, Nimrod. Write at once for prices.

A. C. HALLMAN, New Dundee, Waterloo Co., Ont.

The Best Hotel in Detroit

Can do no more for you in the way of comfortable beds and good meals than the Franklin House, at Bates and Larned Streets. Rates are \$1.50 to \$2.00 a day. American plan. Woodward and Jefferson Avenues are only a block away, with cars to all parts of the city. Excellent accommodations for wheelmen.

MILLER & SIBLEY'S Jerseys

BIG COWS HEAVY MILKERS RICH PEDIGREES SOUND COWS GREAT BUTTERMAKERS FULL FOREUDERS LARGE, WELL-PLACED TEATS.

Championship yearly milk record in Jersey breed for two-year-olds, as well as mature cows, held by this herd.

187 187 First Prizes and Sweepstakes won by this herd at 18 State or greater fairs. First prize herd in 1897 wherever shown, viz.: at New York State Fair; Victorian Era Exposition, Toronto; Western Fair, London, Canada; Central Canada Exposition, Ottawa. In previous years, first prize herd at New York, Pennsylvania, Ohio, West Virginia, Indiana, Illinois, and Missouri State Fairs, and Cotton States Exposition and Live Stock Show of America, etc.

Every animal over one year old has been tuberculin tested. Our animals are not cheap. They are worth what we ask for them. In general, no bull, heifer or cow for less than \$200. If you want our kind of Jerseys, come and see our herd. If you can't come, write for what you want. No trades. No Catalogue.

MILLER & SIBLEY,

Special literature sent if this paper is mentioned.

FRANKLIN, Venango Co., Pa.

JOHN PULFER, BRAMPTON, ONT.

Breeder of choice Jerseys reg. and high-grade Jersey SWINE. Young stock always for sale at prices that should sell them. 12-2-y-o

Stock Imported!

MR. F. S. PEER, Mt. Morris, N. Y., sails for England, Jan. 29th, and will be pleased to correspond with any reliable breeders or farmers wishing to import high-class show or breeding stock.

"Gem Holstein Herd."

STOCK FOR SALE!

We only keep and breed registered Holstein-Friesians. We have now some choice young bulls and heifers, also some older animals, all of the very best dairy quality, that we will sell, one or more at a time, on reasonable terms. Correspondence solicited.

ELLIS BROTHERS, BEDFORD PARK P. O., ONT. Shipping Station, Toronto. 7-y-om

Maple Hill Holstein-Friesians

SPECIAL OFFERING.

Three bull calves, sired by Sir Pieterje Josephine Mechtildie, whose five nearest female ancestors average over 25 pounds butter per week, and out of the great cows, Cornelia Tensen, Lady Akkrum 2nd, and Inka Rose Pieterje DeKol. If you want a bull to head your herd why not get the best?

11-y-om G. W. CLEMONS, St. George, Ont.

JOHN TREMAIN, FOREST, ONT.,

BREEDER OF HIGH-CLASS

Holstein Cattle.

The stock of which being purchased from the noted herds of B. B. Lord (Sincclairville, N. Y.) and H. Bolter (Cassell). Young stock of gilt-edge breeding for sale.

FOR SALE AT ONCE.

Two registered Holstein cows in calf, or will exchange for young Shorthorn bulls or heifers. Also Herrison's bearded wheat at \$1.25 per bu.

J. FRED DAVIDSON, PETERBORO, ONT. Box 903.

BROOKBANK HOLSTEINS.

Champion milk and butter herd. Can sell a limited number of bulls and heifers one month old and up; some nice ones from our show herd. First come first served. Quality unsurpassed. Prices right. Write or come and see.

A & G. RICE, OXFORD CO., ONT. -OM CURRIE'S CROSSING.

SPRING BROOK STOCK FARM.

Choice Tamworth pigs ready to wean, sired by the prize-winning imported boar, Nimrod. Write at once for prices.

A. C. HALLMAN, New Dundee, Waterloo Co., Ont.

The Best Hotel in Detroit

Can do no more for you in the way of comfortable beds and good meals than the Franklin House, at Bates and Larned Streets. Rates are \$1.50 to \$2.00 a day. American plan. Woodward and Jefferson Avenues are only a block away, with cars to all parts of the city. Excellent accommodations for wheelmen.

M. H. JAMES & SON, Proprietors Bates and Larned Sts., Detroit, Mich.

Premiums!

COMMENCE
CANVASSING
TO-DAY.



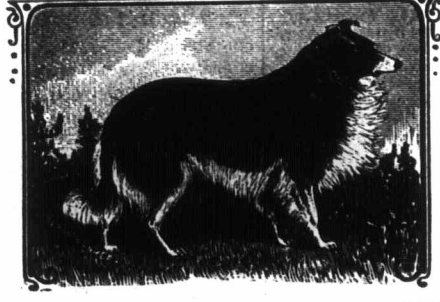
OUR NEW
Self-binder.

WE have for a long time been in search of a suitable binder for the FARMER'S ADVOCATE, and have at last secured what is wanted. It is handy, neat, handsome, strong and durable; black duck back, and cloth sides, with gold lettering. Each copy of the paper, as it is received by the reader, can be securely fastened within the binder, presenting the appearance of a fine cloth-bound book. In this way the paper can be preserved for reference, thus doubling its value. The files of the FARMER'S ADVOCATE constitute a volume of practical high-class agricultural matter, thoroughly up-to-date, such as can be got in no other way. We answer hundreds of important questions during the year. In order that all our friends may secure it we make two propositions:

We will send this splendid and useful premium, post prepaid, to any one sending us two new yearly subscriptions.
We will sell the binders at 75 cents each.

HOW TO GET A

First-class Collie



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

Bagster's NEW COMPREHENSIVE Teacher's Bible

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

Binding—

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

Paper, Type, Etc.—

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

Maps (with index)—

Revised and brought down to January, 1896.

Helps—

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

How to obtain this Handsome and Valuable Bible

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





XMAS NUMBER FOR 1897 **\$1.**
AND ALL OF 1898 FOR

Handsome Rings

WARRANTED TEN KARAT GOLD.

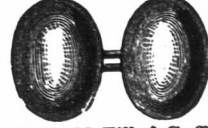
To find the size of ring required, take a narrow strip of paper that will draw tightly around the finger, forward same to us, and we will assure you a perfect fit.

CHILDREN'S OR MISSES' REAL STONE SETTING.

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No. 1—Price, \$1.25.
1 Pearl, 2 Garnets.
2 New Subscribers. | 
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3 Pearls.
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1 Pearl, 2 Garnets or Coral.
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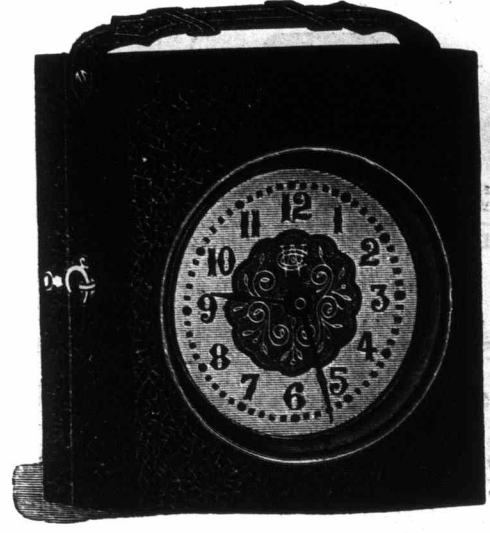
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2 Pearls, 3 Garnets.
5 New Subscribers. | 
No. 6—Price, \$3.50.
2 Garnets 5 Pearls.
5 New Subscribers. | 
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1 Garnet, 2 Pearls.
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Gent's Gold Filled Cuff Links, warranted for 20 years, for 3 new names. In Sterling Silver for 1 New Subscriber.



Sterling Silver Canoe Scarf Pin, can also be used as lady's stick pin, 1 New Subscriber.



Fine Gold-finished Clock, handsomely decorated dial; fitted in Maroon Seal Leather Case. 4 New Subscribers.



Spray Pump!

OUR readers know the importance of having a good Spray Pump, and we are pleased to state we have made arrangements with the Spramotor Co., of this City, whereby we can supply the Spramotor Jr. to anyone sending Ten New Subscribers accompanied by \$10 in cash. It will be found a great success for spraying all kinds of fruit trees, painting your barns and fences and rough surfaces, whitewashing, disinfecting stables, poultry houses and cellars. It is built very carefully. The mechanical agitator, strainer, base casting, plunger tube, air chamber and hose couplings are in brass.

OUR HANDSOME LIVE STOCK ENGRAVINGS:

- "Canada's Glory,"
- "Canada's Pride,"
- "Canada's Columbian Victors."

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

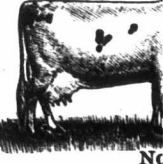
12 MONTHS FREE!

Any subscriber may have his own subscription credited 12 months for sending two new subscribers at \$1.00 each.

FOR CANVASSING OUTFIT ADDRESS:
The Wm. Weld Co., Limited,
LONDON ONT.

Import

The undersigned... Village, on or about... from the herds of... number of Canada... -om



Ayrshires, Shropshire

Our excellent... headed by our no... Tam Glen heads... Pogis of St. Anne... young stock are a... B

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To introduce 'the... Garden and Flow... ts of choicest Vegg... Book from which y... Get your order on fi... we're very busy.

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GUE

This is the Dairy... Large, vigorous a... rich milk. Several... very reasonable pr... spared. Address... 17-y-o

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UP-TO-... OF CAL...

Bull

OF TH... For... Address—... H. D... 17-y-om C

Silver-Cr

COCKEREL... Eggs... WRIT... T. HAR... -o

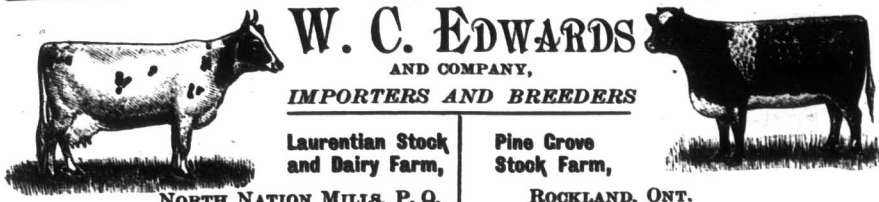
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Bronze and W... Chester... W. E. WRIGHT, -

AUCTION SALE
OF
Imported Shorthorn Bulls

The undersigned will offer at Public Auction at his farm, 1 1/2 miles from Markham Village, on or about **MARCH 16th, 1888**, eleven bulls recently imported from the herds of Messrs. Campbell, Duthie, and Marr, Aberdeenshire, Scotland. Also a number of Canadian-bred bulls and females. Farm 20 miles north of Toronto.

JOHN ISAAC, Markham, Ont.



W. C. EDWARDS
AND COMPANY,
IMPORTERS AND BREEDERS

Laurentian Stock and Dairy Farm,
NORTH NATION MILLS, P. Q.

Pine Grove Stock Farm,
ROCKLAND, ONT.

Ayrshires, Jerseys, Shropshires, Berkshires.

Shropshires and Scotch Shorthorns.

Our excellent aged herd of Ayrshires is headed by our noted imported bull Cyclone. Tam Glen heads the young herd, and Lisgar Pogis of St. Anne's heads the Jerseys. The young stock are all from time-tried dams.

The imported Missie bull, Scottish Pride, at head of herd, assisted by British Knight. Special bargains in young bulls, young cows and heifers of the best of breeding.

ED. McLEAN, Manager.

JOS. W. BARNETT, Manager.

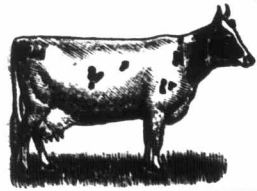
HAMMOND'S FREE SEED DISTRIBUTION

Government Free Seeds are simply "not in it."

To introduce the Best Michigan Northern Crown New Land Seed Potatoes, Farm Garden and Flower Seeds everywhere, I will give away, ABSOLUTELY FREE, 500,000 packets of choicest Vegetable and Flower Seeds. Your name on a postal card gets my Free Seed Book from which you may select FREE your supply of seeds for an entire garden. Write to-day. Get your order on file: **HARRY N. HAMMOND, Seedsman, Bx. 5, Decatur, Mich.** we're very busy.

Isaleigh Grange Stock Farm, DANVILLE, QUEBEC.

Ayrshire and Guernsey Cattle, Imp. Yorkshire Swine and Shropshire Sheep.



Ayrshire herd headed by the noted bull, Matchless 126; sire Imp. Glencairn, dam Nellie Osborne. We are offering a choice lot of young stock, of both sexes, in both Ayrshire and Guernseys, at very low figures. Also bargains in sheep and pigs for the next month.



Particulars furnished on application to—

J. N. GREENSHIELDS, Prop. 9 y-om T. D. McCALLUM, Mgr.

REID'S TREES
ARE RELIABLE.
Everything grown in Reid's Nurseries is healthy, well-rooted and true to name. Every effort is made to save expense to customers. We sell direct and ship direct, saving fifty per cent. on Trees, Shrubs, Vines. Write for catalogue, estimates or suggestions. Try Star Strawberry, Eldorado Blackberry.

GUERNSEYS

This is the Dairy breed for ordinary farmers. Large, vigorous and hardy, giving plenty of rich milk. Several fine young bulls for sale at very reasonable prices. A few heifers can be spared.

Address: **SYDNEY FISHER,**

17-y-o **Alva Farm, Knowlton, P. Q.**

Ingleside Herefords.

UP-TO-DATE HERD OF CANADA!

Bull Calves OF THE RIGHT SORT For Sale.

Address—
H. D. SMITH,
17-y-om **Compton, Que.**

Silver-Gray Dorkings

COCKERELS AND PULLETS.

Also Eggs for Hatching

WRITE FOR PRICES.

T. HARDY SHORE,
GLANWORTH, ONT.

Shropshire Sheep, Bronze and White Holland Turkeys, Chester White Hogs.
W. E. WRIGHT, - GLANWORTH, ONTARIO.

LITTLE'S PATENT FLUID SHEEP DIP AND CATTLE WASH

THE ORIGINAL

Non-Poisonous Fluid Dip.

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

FOR SHEEP:

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

CATTLE, HORSES, PIGS, ETC.:

Cleanses the skin from all insects, and makes the coat beautifully soft and glossy. PREVENTS the attack of warble fly.

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

NO DANGER; SAFE,

CHEAP, and EFFECTIVE.

BEWARE OF IMITATIONS.

Sold in large tins at 75c. Sufficient in each to make wash, according to strength required. Special terms to breeders, ranchmen, and others requiring large quantities.

Sold by all druggists. Send for pamphlet.

Robt. Wightman,
DRUGGIST, - OWEN SOUND, ONT.
Sole agent for the Dominion. -om-

ASHTON FRONTVIEW STOCK FARM

A. J. WATSON, CASTLEBERG, ONT.,
Importer and breeder of Cotswold Sheep, Shorthorn Cattle, and Berkshire Swine.
Station and Telegraph Office, Bolton.
C. P. R., or Fairgrave, G. T. R.

Annual Meeting of Hereford Breeders.

The seventh annual meeting of the Hereford Breeders' Association was held at the Kerby House, Brantford, on Tuesday, Dec. 8th. In the absence of President H. D. Smith, Compton, Que., A. Rawlings, of Forest, Ont., took the chair. A letter was read by the secretary, H. Wade, of Toronto, from the president, stating that he was sorry he could not leave home in time to be at the meeting, and in which he said: "As far as the Hereford business in the past year is concerned, all I can say is, that as far as I am concerned, it has been the best year since I have had anything to do with the Herefords. I could have sold five times the stock if I had had them. I have sold no calves under \$100 and as high as \$150, and for older bulls, \$400. I notice in the prize list for the Brantford Fat Stock Show that an entry fee is charged on specials awarded by the Live Stock Association and private individuals. I do not think that this is right, as the prizes were offered to induce Hereford breeders to exhibit, and not to have them contribute extra funds to the Fat Stock Show. It was decided that the same officers should serve for another year, as follows: President, H. D. Smith, Compton, Que.; Vice-President, Alf. Stone, Guelph; Secretary-Treasurer, H. Wade, Directors—George Brent, Warwick; A. Waldie, Acton; Richard Stait, Forest; James Carswell, Renfrew; F. A. Fleming, Toronto; A. Rawlings, Forest; H. Reed, Mimosa; G. Warren Green, Toronto. We have recorded 209 registrations during the last year, 122 cows and eighty-seven bulls, so we now have 742 pedigrees ready for our use; a few of the first ones also were sent us to copy, out of the 1,114 destroyed. Our herd book should be better supported by Canadians."

NOTICES.

We have received the 1888 catalogue of the Kioto Seed Company, Sioux Falls, South Dakota, which is handsomely illustrated, and includes a great variety of field, garden and flower seeds, for the quality and excellence of which strong claims are made. To secure a copy of this beautiful catalogue, address as above.

The Toronto Mail and Empire has done itself and readers a valuable favor in issuing such a beautiful and interesting Christmas number. Its many pages of interesting literary matter and illustrations are literally the result of "home production," having been executed by members of the Mail and Empire staff. The many stories are seasonable, not tediously long, and being illustrated as they are by sketches made by the writers, they are peculiarly live and bright. The numerous colored inserts made in the new tricolor process are artistic and rich in effect. The cartoon page entitled "Frolic and Fun" is full of interest, especially to politicians, as all the prominent members of either government are naturally cartooned and represented as engaged in a lively tobogganing and skating party. The number is a worthy one and a credit to the paper issuing it.

In most works on veterinary science, and to a large extent in veterinary practice, horse dentistry is far too much overlooked. This statement needs no other defence than to point out that loss of appetite, indigestion, poor condition, and also rearing, pulling, bolting and other disagreeable habits and dangerous vices are largely the result of faulty teeth. A well-gotten-up treatise on practical horse dentistry has been recently prepared by Drs. Cohn and Swales, 38 Brampton Road, London, S. W., England, and published by Vinton & Co., 9 New Bridge street, London, E. C., Eng. Its introduction of 12 pages is exceedingly live, setting forth in the interests of our faithful friend and servant the need for a greater care for his mouth. Following next in order are chapters upon "Wolfe Teeth," "Molars," "The Age and of the Horse," "Incisors," "A Few Hints on Examining and Operating on the Teeth." Where necessary the pages are liberally illustrated so as to convey the correct impression to the reader. To any horseman the book is easily worth the price asked, 3 shillings and 6 pence. It is exceedingly clearly printed on excellent paper, and serviceably bound in boards.

GOSSIP.

Messrs. T. & H. Shore, White Oak, Ont., report making some good sales from their poultry advertisement which appears in another column.

We are pleased to learn that there are 100 students now attending the Guelph (Ont.) Dairy School, several ladies in the Home Dairy Department being among the number.

In another column Mr. Robt. Davies, Thorncliffe Stock Farm, Toronto, Ont., offers a number of young Ayrshire bulls fit for service. These are from noted families and heavy performers.

Messrs. A. & D. Brown, Iona, Ont., advertise in this issue two Shorthorn bulls, one of which is a son of imported Warfare and imported Charlotte, the other a son of imported Royal George, dam by imported Warfare. These bulls should be worth looking after, if they are as good as their pedigrees.

Mr. J. W. Barnett, manager of the Pine Grove Shorthorn herd of W. C. Edwards & Co., Rockland, Ont., writes: "We can report the herd and flock in good healthy condition, and a brisk demand for stock of all kinds. We have sold some this season, and have some right good young bulls and heifers to sell yet, at prices a way down if taken soon. We have just bought from Mr. J. M. Gardhouse the imp. bull, Scottish Pride, to head our herd. Though only in grass condition, he is straight and smooth, with plenty of size, and handles just right. His breeding is of the best. He was imp. in dam by D. D. Wilson, of Seaforth, Ont., and is out of Missie 142nd, bred by Mr. Marr, of Upper Mill, and got by Mr. Duthie's Pride of Morning, allowed to be the best sire in Aberdeen. Missie 142nd is now owned at Pine Grove, and I saw her dam at Upper Mill last summer suckling her 17th calf. We are expecting to get something good from Scottish Pride."

Fruit.

Trees and Vines become hardier, and their products better colored and better flavored when liberally treated with fertilizers containing at least 10% actual

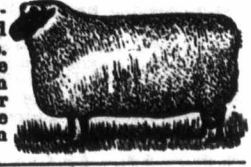
Potash.

FREE An illustrated book which tells what Potash is, and how it should be used, is sent free to all applicants. Send your address.

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

SMITH EVANS, Gourock, Ont.

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



FOR CHOICE

Shropshire Rams

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

SHROPSHIRE SHEEP...

AND JERSEY CATTLE.

At present offering a choice bunch of thrifty, well-covered young Shrops. Also two young Jersey bulls, ready for service.

D. H. KETCHESON, MENIE, ONT.

OAK LODGE HERD OF YORKSHIRES



Extra choice young sows in pig. Boars and sows, two to four months, choicely bred, quality guaranteed. I am now booking orders for spring pigs. Write for prices. I am breeding the correct type of bacon hogs.

J. E. BRETHOUR, BURFORD, BRANT CO.

R. HONEY,

Warkworth, Ont., Northumberland Co.,

BREEDER OF
Reg. Holsteins, Large White Yorkshires, and Cotswold Sheep.

Choice young Yorkshires for sale at prices to suit the times. Orders booked for choice Cotswold ram lambs. 12-2-y-o

A Snap! IMPROVED YORKSHIRE AND LARGE ENGLISH BERKSHIRE

English Berkshires Boars and Sows weighing from 30 to 40 lbs. at \$6.00, older ones proportionately cheap. Also a few fancy-bred Shropshire Lambs at reasonable prices.

13-1-y-o **W. R. BOWMAN, Mt. Forest, Ont.**

ROSE HILL FARM.

JAMES DORRANCE, SEAFORTH, ONT.

BREEDER OF
REGISTERED: BERKSHIRES

Of the most approved type. Choice young stock always for sale. Write at once and secure a bargain. 12-2-y-om

LARGE ENGLISH BERKSHIRES.

Choice stock of all ages for sale. Write for prices.

H. BENNETT & SON,
St. Williams, Ont.
Norfolk County. om-

BERKSHIRES, BERKSHIRES, BERKSHIRES

My herd contains such blood as Baron Lee, Varna Duke, and other imported strains, with the celebrated sire, First Prize, at the head. 2-2-y-o **WM. McALLISTER, VARNA, ONT.**

A COLLEGE EDUCATION 50 CENTS A WEEK

For \$2 down and \$2 a month, we give AN EDUCATION IN

MECHANICAL DRAWING

Machine Design; Electrical, Mechanical or Civil Engineering; Refrigeration; Locomotive, Steam, Marine or Gas Engineering; Bookkeeping; Shorthand; English Branches; Pedagogy; Chemistry; English Branches; Pedagogical; Wiring; 43 COURSES; Metal, Coal or Placer Mining; Architectural Drawing; Surveying and Mapping; Sanitary Plumbing; Architecture; Sheet Metal Pattern Drafting; Architectural Design; Prospecting.

GUARANTEED SUCCESS We have helped thousands to better positions & salaries. Circular free; state subject you wish to study. International Correspondence Schools, Box 200 Scranton, Pa.

1898 OFFERING FOR 1898

TWO extra good Berkshire boars fit for service, and a number of young sows in pig to show boars. Also a fine lot of 3-months pigs. York boars and sows of the best type from 3 months to 8 months old from show stock. Prices right. Express charges prepaid. Inspection invited. Write on H. J. DAVIS, Box 200, Woodstock, Ont.

English Berkshires. Herd headed by three first-prize boars. Large size, strong bone, fine quality, and a choice lot of breeding sows. Orders booked for spring pigs. GEORGE GREEN, Fairview P.O., Ontario. Stratford Station and Telegraph Office.

Berkshires One aged imported boar, one yearling boar. YOUNG STOCK, BOTH SEX. GEORGE N. HARRIS, Lynden, Ontario.

Shorthorns, Chester Whites and Berkshires PRESENT OFFERINGS. - 2 Shorthorn bulls 8 months old. 3 Chester White boars 3 months old. 2 Chester White sows 3 months old. 1 Berkshire boar 3 months old. 4 Berkshire sows three months old. Also Black Minorcas and S.G. Dorkings. We register and prepay express charges. CAMPBELL & MARTINSON, Near Lewisville, G. T. R. NORTHWOOD, ONT.

CHESTER WHITE BOARS Fit for service, to be sold at a snap for the next 15 days to close them out. Also Tamworth sows (bred), and fall pigs of both breeds and either sex at rock-bottom prices. Our herds have again won the sweepstakes at all large exhibitions throughout Canada in 1897. Write for prices. H. GEORGE & SONS, CRAMPTON, ONT.

E.D. GEORGE PUTNAM, ONT. Importer and Breeder of Ohio Improved Chester White Swine. The largest and oldest established registered herd in Canada. I make this breed a specialty, and furnish a good pig at a fair price. Write for prices. 14-2-y-om

HURON HERDS OF POLAND-CHINA, DUROC-JERSEY and TAMWORTH HOGS. Will offer the following No. 1 stock at cut-down prices for 30 days only: Two Tamworth boars (one of them King of Duke 648, the 3rd prize winner at London this fall); two Duroc-Jersey boars, six months (one the winner of 2nd at London this fall); one aged Duroc-Jersey sow, never been beaten in Huron county. Write, if you want a snap. WESLEY W. FISHER, Benmiller, Ont.

Poland-Chinas. Six young male pigs, also two females (from Lady Darkness No. 1106, sire Blackamoors, imp., No. 940), farrowed April 22; ready for Dec. service; price \$15 each, with registered certificate. WM. J. DUCK, MORFETH, ONT.

Oxford Herd of Winning Poland-Chinas. Having won the herd prizes at Toronto, London, Ottawa, and Bradford Fat Stock Show, we feel justified in stating that we are in a position to offer you what you may ask for on gilt-edge prize-winning stock. W. & H. JONES, OXFORD CO., MT. ELGIN.

LIVE STOCK AUCTION SALES Conducted in all parts of the country. Pedigree stock a specialty. Write for terms. References: J. C. Snell, Edmonton; John I. Hobson, Guelph; Hon. M. H. Cochran, Compton, P. Q.; or this office. 14-2-y-o JOHN SMITH, Brampton.

GOSSIP. V. M. Miller, Bruce Co., Ont., a new subscriber, writes: "We have been trying to pick out the best agricultural paper to be had, and have decided in favor of the ADVOCATE. It seems to treat on everything."

The Canadian Jersey Breeders' Association are to be congratulated on the appointment of Mr. Richard Reid, of Berlin, Ont., to the Secretaryship of their Association. He is a live man, in the prime of life, a lover of Jerseys, and has had considerable practical experience in breeding and feeding them. We shall look for a better record from the Association as a result of his election.

THE TRUTH IN RHYME. "The ADVOCATE is good to read. It tells the farmer what he needs. If all would take and read it well, They would have larger crops to sell." ROBERT WILSON, Leeds Co., Ont.

GEORGE N. HARRIS' BERKSHIRES. At the head of the Berkshire herd of Mr. Geo. N. Harris, Lynden, Ont., we found the worthy sire Cressman's Dundee (imp. in dam) 2977, by Waterloo 4130, and out of Kingston 17th, with pedigree tracing through many noted English families. He was imported from the herd of Col. J. Handy Jenkins, and brought to the present farm when quite young. He possesses a good amount of substance, weighing 600 pounds, stands well on his feet, is nicely marked, and stamps his superior quality on his progeny, of which the herd is so largely composed that Mr. Harris offers him for sale, and we consider little risk can be run by introducing such blood into any herd in the Province. In the showing he was highly successful. A few very worthy sows are always kept on hand. At present may be found Cressman's Beauty (imp. in dam) 3110, by Wickwood 4048, and out of Kingston 19th; imported in 1883 by Israel Cressman, New Dundee, Ont. She has produced two litters yearly on the farm, at the same time Cressman's Orkney 3220, by Imp. Dorset Chief-tain 1581, and out of May Dundee, has given a good account of herself, her progeny being true in type and conformation, and of good size. A bunch of choice young sows of the above breeding are offered for sale and can prove valuable blood to many breeders, being so widely different in their breeding from the majority of Berkshires found in Canada.

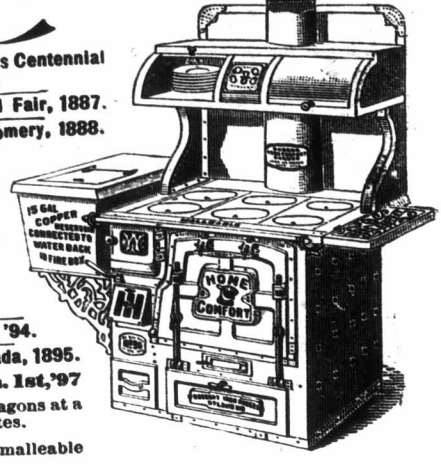
T. BROOKS & SON'S AYRSHIRES, CHESTERS AND TAMWORTHS. While attending the Fat Stock Show, our attention was directed to a pair of worthy Ayrshire cows, the property of Messrs. T. Brooks & Son, Brantford, which led to our visit to the farm, where we found a solid foundation for a good dairy herd. The firm purchased their first Ayrshires from Michael Ballantyne, St. Mary's, in 1894, and three females, and later a pair from W. B. Cookburn, Aberfoyle, and with the improved facilities and an accurate knowledge of the cattle business a very choice young herd has been brought together. The present stock bull, Beauty's Style of Auchinbrain 1129, by Style Forever of Drumjoan (2362), and out of Old Beauty's Lady Ayrshire 1694, was imported by Hon. The Earl of Bessborough in 1892, along with five young heifers, and employed in the herd for four seasons, where he was also their show bull, and winner at head of herd of four, the get of one bull. He possesses immense length, with style, a clean-cut conformation, and velvety skin, covers and a pair of white dotted with brown, making him a true type of the up-to-date Ayrshire. Daisy Bell 2490, by Jock Meadowside 713, and out of Ada 1564, is four years old, and has dropped her third calf. She is a typical dairy cow, carrying a large, well balanced udder. Bell of Rosemount 2837, by Mack 1476, and out of Maid Sullivan 2072, is two past, and dropped her calf in September. Lady Brant 2966, by Mack 1476, and out of Lydia 2489, is a beauty. In the showing she has never met defeat; is covered by a beautiful velvety skin, and is one that a breeder may justly be proud of. We saw a pair of sweet yearlings and a pair under a year by Sunrise 1874 that are true to type. This firm have received their full share of recognition in the showing, and from the manner in which they have gone into breeding Ayrshires we predict nothing but success, having only the best, to which the best of attention is given.

Chesters and Tamworths also receive some attention here. In the Chester pens we found the stock boar, White Boy 770, by Rustler 415, and out of Port 516, imported from his breeder, Mr. Whitney, Salem, Ohio, by Butler & Son, and is now two years old. Lucy 642, by U. S. King 619, and out of Vias 255, was bred by E. D. George. She has had three litters, while Peggie 641, her full sister, is now suckling her third litter to White Boy. Abess 660, by Longfellow 659, and out of Diety 385, was purchased from the Ontario Agricultural College, and is due to drop her second litter in December, as is also her full sister, Amity, both to White Boy. The sows are a big, strong, well-made, even lot, devoid of coarseness, possessing good length and immense depth of body.

In Tamworths we were shown four brood sows. The foundation, Maple Queen 45, was purchased from Ontario Agricultural College. She is a three-year-old animal by Buffalo Bill 143, and out of Daisy 147. She is now carrying her fourth litter; three of her daughters are being retained on the farm, and are in pig to Glen Sandy 17, the stock boar by Ingersoll Duke 12th, and out of Glen Queen 4, by Imp. Morman's Bride. Glen Sandy is a true type of the breed, and at three years old tipped the scales at 917 pounds, and possessing sufficient bone to carry his immense weight with apparent ease. A young boar, King George 676, by Duke of Avon 305, and out of Countess 2nd, was bred by H. George & Son, Crampton. He is now a year old, kept in good serviceable condition, and is true in conformation. He is now held for sale, and should prove an improver of pure-breds, or a grand animal from which to obtain the kind of cross-breds of which we hear so much from the pork packers. Taking the stock all through, one feels repaid for visiting such an establishment, for it is clearly evident that the firm have their own best interests and those of their patrons prominently before them, and spare no pains in the effort to secure both.

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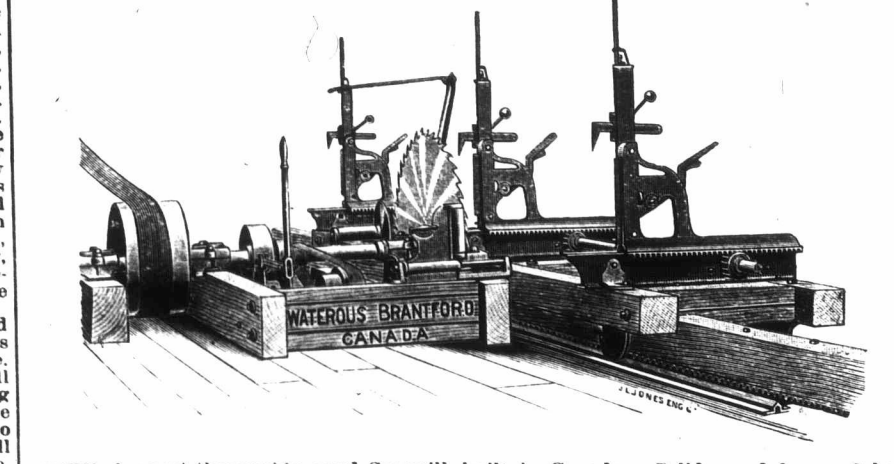


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