

FARMER'S ADVOCATE

AND HOME MAGAZINE

FOUNDED 1866.

VOL. XXIV.

LONDON, ONT., MARCH, 1889.

Whole No. 279.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.

THE FARMER'S ADVOCATE & HOME MAGAZINE

WILLIAM WELD, EDITOR AND PROPRIETOR

THE LEADING AGRICULTURAL JOURNAL PUBLISHED IN THE DOMINION.

The FARMER'S ADVOCATE is published on or about the 1st of each month. Is impartial and independent of all classes or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical and reliable information for farmers, dairymen, gardeners and stockmen, of any publication in Canada.

Terms of Subscription—\$1.00 per year in advance; \$1.25 if in arrears; single copies, 10c. each. New subscriptions can commence with any month.

The Advocate is sent to subscribers until an explicit order is received for its discontinuance, and all payment of arrearages are made as required by law.

Remittances should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

Always give the Name of the Post Office to which your paper is sent. Your name cannot be found on our books unless this is done.

Discontinuances—Remember that the publisher must be notified by letter when a subscriber wishes his paper stopped. All arrearages must be paid. Returning your paper will not enable us to discontinue it, as we cannot find your name on our books unless your Post Office address is given.

The Law is, that all subscribers to newspapers are held responsible until all arrearages are paid, and their paper ordered to be discontinued.

The Date on your Label shows to what time your subscription is paid.

Advertising Rates—Single insertion, 25 cents per line. Contract rates furnished on application.

Address—THE FARMER'S ADVOCATE, 360 Richmond Street, LONDON, ONT., CANADA.

Our Monthly Prize Essays.

CONDITIONS OF COMPETITION.

1.—No award will be made unless one essay at least comes up to the standard for publication.

2.—The essays will be judged by the ideas, arguments, conciseness and conformity with the subject, and not by the grammar, punctuation or spelling, our object being to encourage farmers who have enjoyed few educational advantages.

3.—Should one or more essays, in addition to the one receiving the first prize, present a different view of the question, a second prize will be awarded, but the payment will be in agricultural books. First prize essayists may choose books or money, or part of both. Selections of books from our advertised list must be sent in not later than the 15th of the month in which the essays appear. Second prize essayists may order books for any amount not exceeding \$3.00, but no balance will be remitted in cash. When first prize essayists mention nothing about books, we will remit the money.

Our prize of \$5 has been awarded to Mr. D. E. Smith for the best original essay on *What Profit is Derived from the Average Canadian Dairy Cow? Can this Profit be Increased? How?*

A prize of \$5 will be given for the best essay on *Potato Culture*. The writer must also name the six best varieties suitable to the north; stating the merits and other qualities of each sort. Essay not to occupy more than one page, and to be handed in not later than March 15th.

A prize of \$5 will be given for the best essay showing the relative profits of *Soiling Cattle, Partial Soiling, or Grazing*. The subject to be considered from the standpoint of the older and richer provinces. All essays to be in by the 15th of April.

Editorial.

To Our Subscribers.

By consulting the labels which are always attached to your papers, you can see at a glance when your subscription expires. A paper marked "Dec. '86," means that the receiver is in arrears since Dec., 1886, and owes us for the years 1887 and 1888; a label marked "Jan. '88" shows the subscriber to be now fourteen months in arrears. These amounts are insignificant to each individual, but the total arrears now due us amount to a large sum. We ask every subscriber to consult the label on his or her paper, and kindly forward amounts due us without delay. We are now sending out accounts; among so many thousands there will doubtless be a few errors. Should any of you receive an account you think wrong communicate with us at once, that we may rectify the matter. When you send us your subscription, see that the label on your next paper is changed to give you credit for money sent. A paper marked "Jan. '90" means that your paper is paid up to that date. If the proper changes are not made, write us immediately, that we may be able to trace your money or detect the error. We ask the prompt attention of all our readers to these matters, and must insist on prompt payment from all. We have heretofore been very liberal with all our subscribers, and ask prompt and liberal treatment from them now.

New Seed Grains for Trial

We have procured some new seed grain, which we believe is of more than usual merit. One of which is the Manitou spring wheat. The crop from which we secured our stock, we were assured by a reliable grower, produced sixty bushels to the acre. Another is, the Colorado wheat, described in other columns. The Cave oat is another. It is a very strong grower. The straw is of good quality and much relished by stock. It ripens about the same time as spring wheat; is a heavy cropper; grain has a very thin hull, and weighs heavy. This is a very promising new white oat, and has given splendid satisfaction wherever sown. It is very much superior to the Welcome oat, and produces more straw than Vick's American Banner, the grain of which it much resembles. The White Canada oat (described in other columns) is the last, but is not excelled by any oat we have ever seen growing. We will mail a 4-oz. package of any or all of the above grain to any of our subscribers who will send us 5c. to pay postage and packing. We ask this as a pledge of good faith, not as a remuneration for our trouble. Last year we sent

a great many packages of seed grain free to our subscribers, and asked them to report on results. We have since learned that some packages were never sown, yet a great many did sow them. Hereafter we will send promising new grains only to those who will send to us for them. All who wish us to send them packages must apply before the 10th of April.

Norway Spruce as Premiums.

For twenty-four new subscribers prepaid for one year, or twelve prepaid for two years, we will give 100 trees; for twelve new subscribers prepaid for one year, or for six prepaid for two years, we will give 50 trees, and for six new subscribers we will give 25 trees. These trees will be twenty to twenty-four inches high, transplanted three times. Express charges will be paid to any part of Ontario.

If some prefer smaller trees and more of them, to such we offer by mail, postage paid, for 20 new subscribers prepaid for one year, or 10 for two years, 140 trees of the same variety, 12 to 14 inches high. For 10 new subscribers prepaid for one year, or 5 for two years, 70 trees. For 5 new subscribers prepaid for one year, 35 trees.

The Last of the Provincial.

The motion of Mr. Awrey, of Wentworth, re the Provincial, was well timed, and had it passed without being amended by Mr. Fraser, London would not have mourned the loss nor called Mr. Drury to task for not carrying out the promise to hold the exhibition at London this year. But as it is now a settled fact that London is to have the Provincial Exhibition this season, even though it be against her wishes, let us hope it will be, as usual here, a success, and, as it is doomed to expire, let the final flash be a brilliant one. That the Provincial has been useful in the past, none will deny; that its continuance, under the present system of management, would be unwise is not even a debatable question. The very system of itinerancy subjects it to financial loss, and that the management has not been characterized with strictest economy must be admitted. Men have been taken from the western portion of the Province away east to Ottawa and paid three dollars per day and railway fare for departmental superintendants and other minor positions, when local men could have been had for half the money and saved the railway fare. Even the judges have been, in some cases, appointed in a manner to at least give color to the assertion that "toadyism" prevailed. In some cases judges have been taken over two hundred miles to judge a class for which they had no special qualifications, and sometimes only a modicum of ability. But

what need for argument or illustration; the very fact that with a grant from government sufficient to make a respectable prize list and have enough left to pay a goodly portion of the expenses of an ordinary fair, the old Provincial is virtually bankrupt.

Fruit Growers' Association of Ontario.

The combined annual and winter meetings of this association, was held according to announcement, in the Court House, Hamilton, on Tuesday evening, Wednesday and Thursday, Feb. 19th, 20th and 21st, and was one of the most successful and interesting meetings ever held by the association. A short address of welcome was given by the Mayor, in which he referred in a happy manner to the fact that agriculture was one of the highest sciences, and he thought such associations as the horticultural tended to increase the love for the farm, and farming as a calling.

The following officers were elected:—President, A. Mc. D. Allan, of Goderich (re-elected); Vice-President, A. M. Smith, St Catharines. Directors—Mr. Croil, P. Bucke, Ottawa; Dr. Bell, Kingston; P. C. Dempsey, Trenton, P. E. County; Thos. Beal, Lindsay; Mr. Wellington, Toronto; Murray Pettit, Winona; A. H. Pettit, Grimsby; J. K. McMichael, Waterford; Mr. Morton, Wingham; J. M. Denton, London; Judge McKenzie, Sarnia; C. G. Caston, Craighurst. Auditors—Mr. Goldie, Guelph, and N. Awry, M. P. P., of Wentworth.

We select the following from the President's annual address:—* * * Buyers must know what is wanted in the market to which they purpose shipping, and must buy such fruit of that description as will carry well, and pay according to the value of the fruit. He regretted that the practice of paying so much per bbl. for a man's fall apples, and so much for his winter apples, prevailed to such an extent, as the grower was not thus educated to know which variety to plant, as each brought the same price to him. He would like to see a price on each variety, that could be honestly paid for it with a reasonable profit. He recommended that the best variety that is hardy enough for a district be the chief variety planted. He thought the present low prices for apples in England, not an unmixed evil, as many who had not felt able to use apples before were being educated to use them, and would find them almost a necessity in the future. He recommended trying different sized packages. The half barrel package had given him greater satisfaction than barrels; they should be made of the shape of a cheese box, with a hoop on each end for the package to rest on, thus taking the strain off the middle of the package. Referring to shipping facilities, he said the Americans get better rates from their steamship and railway companies, by shipping in large quantities, than we can from ours; and that freight was too slow for shipping tomatoes and small fruits to the North-west, while express rates were too high to admit shipping in that way. Through this, the Americans can sell at Winnipeg and Portage la Prairie cheaper than we can. He deplored the carelessness of many packers in packing apples, as very often they were improperly marked, both as to name and quality. Personally he paid growers more, by ten to twenty-five cents per bbl., when they took care of their trees, and gave their orchards attention; and that it paid to do so, as the fruit was invariably much finer. He condemned the present method of judging at

fairs, and hoped soon to see a scale of points adopted. Referring to the codling moth, he thought Paris green the best remedy yet adopted; he claimed that it had driven the curculio from some sections. He regretted that attention to draining, promised when the orchard was located at the Agricultural College Experimental Farm, had not been given, and the orchard was entirely useless for experimental work. He very much regretted the continued exportation of hardwood ashes, as we need them very much for our orchards. He had found the Northern Spy, Ben Davis and Golden Russett doing well at Sault St. Marie and Bruce Mines; also the finest flavored crabs he had ever tasted. He thought, through the ameliorating influence of forestry, fruit could be grown in Manitoba and the North-west; and that forestry will be an absolute necessity in the future, not only on the prairies, but in Ontario. He recommended placing orchards on the north side of shelter belts, as it is the freezing and thawing that destroys the trees.

Mr. Thos. Beal, of Lindsay, read a paper on the varieties of apples suited for central Ontario. A lengthy discussion followed. Mr. Beal recommending that a list of suitable varieties for planting in Ontario be made out that would be a guide for parties ordering trees; but the opinions were so diversified as to varieties, by the representatives of different localities, that it was not considered advisable to do so, the president remarking that it would almost require a list for each county. One member thought apples could be successfully grown wherever the sugar maple or basswood would grow. Several members were in favor of growing seedlings and topgrafting. Mr. Morris, a practical nurseryman, said most seedlings were too tender to make a good stock, and it was necessary to graft at the root. Mr. Caston, referred to the Red Pound apple as one of great merit, both for its quality and hardiness, as well as beauty and productiveness. (He presented one to the ADVOCATE representative measuring eleven and one-half inches in circumference.) And, while not quite equal in flavor to some of the finer sorts, is fine grained, and much superior in everything, unless it be keeping qualities, to the Ben Davis. We very much regret that, on account of the meeting being held late in the month, near the time of going to press, we cannot devote more space to the meeting this month; but we will in succeeding issues give several of the papers, and probably a good part of the discussions.

Score Card for Swine.

At the late meeting of the National Association of expert judges on swine, a new score card, for use on all breeds, was adopted, and committees were appointed to draft definitions, detailed descriptions, and disqualifications for each breed. And we find in the American Agricultural Journals a rehash of the arguments used against the score card by poultry judges, when it was adopted in Canada some seven years ago; and it is quite probable that in half a decade, these objections will look as childish to the swine breeders, as they now do to the Canadian poultrymen. One of the greatest conveniences of the score card is, it enables the breeder to give enquirers and prospective buyers a much better idea of the specimens he offers, than he could do by any other means. Thus, a specimen scoring ninety points, is much less likely to give dissatisfaction when it reaches the buyer, than one represented choice or excellent. This has certainly been the case in poultry.

Farmers' Clubs.

Dominion Farmers' Council.

[The Dominion Farmers' Council meets in the city of London, Ont., on the third Thursday of every month, at 1 o'clock p. m. All communications should be addressed to the Secretary, F. W. HOBSON, LONDON, ONT. This Council has now on hand pamphlets containing its Constitution and By-laws, with an account of its origin, objects, etc.; Constitution and By-laws suitable for Farmers' Clubs, and notes on how to organize a club. These will, on application to the Secretary, be sent free to all parties having in contemplation the organization of clubs.]

On Thursday the 21st ult. the Dominion Farmers' Council assembled, John O'Brien, President, in the chair.

After routine business, Mr. John S. Pearce gave an address on the question

IS DAIRYING MORE PROFITABLE THAN GRAIN GROWING.

In dealing with the subject of my paper, I shall not attempt to go into the details of the profits of one or the losses of the other, but rather show by comparison the advantage of the one over the other, and point out a few of the advantages of dairying, and wherein lies the road to success in that industry. That the dairying business in Canada has been paying, there is no doubt, or it would not have stayed so long with us, nor would it have developed so fast, or to such an extent. In other words, had it not been profitable, it would have gone out of fashion long ago. The fact that Canada, in 1865, was an importer of cheese to the extent of several thousand dollars, while to-day, she is exporting to the amount of some seven or eight million dollars is a pretty good indication of how the dairy business must be paying. Then we have only to look around and view those sections, where this industry has been well established, to see the effect on the farming community of these sections, and then compare them with those who are devoted exclusively to grain growing. Compare these dairy sections with those who are still content to plod along in the old way by selling the fertility off their farms, a little at a time, with each load of grain hauled away to market. We may go a step farther, and compare the prices of land in the old well established dairy sections with that of the grain growing sections, and we will find that the result will be very much in favor of the dairy section. It is estimated that if the annual returns from this extra earning power of the dairy sections, the result of this large increase in the dairy industry within the last twenty years, was capitalized at six per cent, it would represent some thirty million of dollars. Notwithstanding this large development of the dairy industry in some sections, we don't think there is one bushel less grain grown in these sections than there was before the dairy industry was established. But it must be borne in mind, that the dairy business has largely developed a market for coarse grains and feeding stuffs, and these are kept at home and fed on the farms, and thereby no exhaustion of the soil, as would be caused by their direct exportation.

From the report of the Bureau of Industries for 1887, I find that the cost of growing grain was far from profitable. I might say that this estimate was made from the reports of 197 correspondents. The result is as follows:—The crop of fall wheat was grown at a loss of \$2.35 per acre, of spring wheat at a loss of \$1.89, and of peas at \$1.60. On the other hand, the crop of barley was grown at a profit of \$3.80 per acre, of oats at \$1.81, of hay and clover at \$4.93, of corn \$4.10, of potatoes at \$19.17, and of turnips at \$7.86. The cost of producing hay and clover is incomplete, no entries having been made of the proportion of cultivation to be charged against it, or of the manure, or of the price of the seed and labor of seeding. These items would reduce the profit possibly \$1.50 per acre. This is not very flattering for the grain grower. Now it is estimated that the average yield per cow of the best patrons of our cheese factories is \$36.00 per cow for the season of cheese making, to say nothing about the extra returns from butter making

in the
ing fo
head f
for the
\$22.00
of our
profit.
farms
the old
of sell
wealth
better
from th
growing
farm, r
averag
1887 w
20 bush
per acr
8 lbs. o
valuabl
I sh
is the
ful, an
able th
The
tion is
man ca
ing un
or prof
gaged i
go out
he has
will ve
ledge a
simply
more p
acquire
Some
neighb
profit
most a
are the
are ma
can m
yields
supply
of proc
of suc
the dai
before
and inc
As I
factori
patrons
only ge
keeping
allowin
from 3
have y
\$14.00
\$16.00
and ye
give th
der the
pay?"
Now
special
cial att
manage
nor yet
the cov
by so o
tion; l
comfort
Then a
cows in
winter
make t
gradua
cannot
to ma
much
him to
they w
milk w
prepare
farmer,
gin in t
can kee
der he
he is g
green f
No m

in the spring, fall and winter. The cost of keeping these cows is estimated at about \$22.00 per head for feed, allowing nothing for labor or care; for the manure should be equal to these. Taking \$22.00 from \$36.00, we find that the best patrons of our factories are realizing \$14.00 per cow profit. Yet we find a large proportion of our farms are still inclined to hold back and stick to the old methods. They cannot get over the idea of selling their farms by the bushel. But if wealth will not tempt them to a change for a better plan, want will, or they will be driven from the field. Another great objection to grain growing is that it is a crop which is sold off the farm, nothing but the straw being retained. The average yield of wheat per acre in Ontario in 1887 was 16 bushels per acre, and in 1886 it was 20 bushels per acre. Now 18 bushels of wheat per acre takes from the soil 18½ lbs. of nitrogen, 8 lbs. of phosphoric acid, and 1 5½ lbs. of potash; valuable substances, and worth about \$3.75.

I shall now endeavor to show wherein dairying is the best, and can be made the most successful, and in what way it can be made more profitable than it is now.

The first thing to be considered in this connection is the man. It is a true saying, that no man can attain the highest success in any calling unless he has a natural love for the business or profession in which he may engage, or is engaged in. If he has no love for it he had better go out of it at once and take up that for which he has a taste or love. If he has this taste he will very naturally strive to gain all the knowledge possible in regard to his profession, not simply for the purpose of making his business more profitable, but because it is a pleasure to acquire this knowledge.

Some men engage in dairying because their neighbors do so, and not because there is any profit in it to them. Those who produce the most and best milk from a given number of cows are the men who make the most profit, and who are making the dairy business pay them. If I can make a cow which, up to a given period, yields only 3,000 lbs. per season increase her supply up to 6,000 lbs., I thereby lessen the cost of production and increase the profit. The key of success in dairy farming, to my mind, is for the dairyman to keep this one point continually before him, viz.: "Lessen the cost of production and increase the profit."

As I said before, the best patrons of cheese factories average about \$36.00 per cow, and the patrons which give the smallest yield of milk only get some \$16.00 per cow. Now, the cost of keeping a cow is about \$22.00 per head for feed, allowing nothing for labor or care. Taking 22 from 36 we find that men who have herds that have yielded \$36.00 per head have a profit of \$14.00 per cow; while those who realized the \$16.00 must have been working at a serious loss; and yet, how many are aware of this fact, or give the same a casual thought? Is it any wonder that some men say, "Dairying does not pay?"

Now, if a man is going to make dairying a special source of profit he should give it his special attention. He should not leave the whole management in the hands of the women folks, nor yet to the hired man. The man who feeds the cows should also milk them, and he will by so doing give their product his special attention; besides, he will look after the care and comfort of his cows if he has to milk them. Then again, a man, to get a profit out of his cows in the summer, should, during the previous winter months, plan and prepare the way to make this profit. This preparation must be gradual, and the result of close care. A man cannot start out and say:—"I am going to make my cows give me so and so much this summer;" it is no use for him to spring this intention on them, for they will not respond at once. He cannot get milk without suitable food; besides, he must prepare these cows by a course of treatment. The farmer, to get the most from his cows, must begin in the winter by planning how many cows he can keep; how much grain feed and green fodder he will need, and how and when and what he is going to grow, to make this grain feed and green fodder.

No man can succeed in anything unless he has

a definite aim in view, and a definite purpose and full determination of what he means to do. Neither can a man succeed who is content or satisfied with what he is now doing. His aim should be to get 100, yes, 200, lbs. of milk per cow more this year from his herd than he did last year. He must have the motto we mentioned a little while ago before him: "Lessen the cost of production, and increase the profit." This brings me to the next phase of this subject, viz., the cost of feed of the dairy cow; but my paper is now already too long.

After discussing this paper, the members listened to a very instructive address given by Mr. John Robertson,

ON THE DIGESTIVE SYSTEM

of the cow, which we will give with illustrations in a future number.

The next meeting will be held on Thursday, the 21st day of March, when a paper will be read on the subject of dairying, in connection with soiling, corn fodder and ensilage.

Stock.

Chatty Letter from the States.

[From our Chicago Correspondent.]

Last year's cattle receipts were the largest on record, but the current marketing of cattle is far ahead of the corresponding time last year. There are good men who think, however, that the entire year will show an increase, though current prices must be based on current supplies, and not on what may or may not be in the future.

Cattle were never before so low at this season. Plenty of good, fat 1200 to 1400 lb. steers selling at \$3.50 to \$4.

There is a perfect glut of cattle crowding forward to market, and prices are given no opportunity of advancing as they would on moderate receipts.

Mr. John Dunn, the well known cattle buyer and exporter, of Toronto, has lately been buying cattle at Chicago and exporting them *via* Boston. Mr. Dunn expressed himself as being pleased with the method of doing business at Chicago. London prices for States cattle, 13c. to 13½c. for best, dead weight, are as high as a year ago, while States cattle are being bought at \$4 to \$4.60, or \$1 less than a year ago. This gives shippers quite a profitable margin, though some of them are only making up the heavy losses of the past year or two. One of the anomalies of the hog trade the past month or so is the fact, that 100 @ 140 lb. pigs have been selling on the market at 50c. @ 60c. per hundred pounds—more than hogs averaging 400 @ 500 lbs. The latter have been very abundant, and the former very scarce. Owing to the heavy crop of corn and the fact that hogs have been scarce and worth more than any other kind of live stock, farmers have retained all of their brood sows, and nearly all of their pigs to make hogs for the future. When six or seven months old, pigs can be made to weigh 200 lbs. without extraordinary effort, and farmers now are disposed to drop cattle-growing and take up hog-raising. An over supply of hogs is only a question of a little time.

Too much drouth is bad, but too much rain is nearly as bad. Throughout the farming and cattle-feeding country of Texas, north of San Antonio, and east of Fort Worth, there has been so much rain fall this winter that the nutrition has all been washed out of the grass. Down there they have not learned the art or science of cattle feeding very well, and in a rainy season the feed lots are so muddled that the animals work off all their fat in getting around. At any

rate, the cattle being fed down there this winter are not doing much good.

The bitter fight against the dressed-beef men by the butchers is being taken up by the producers and grangers, who have carried the matter to the State legislatures. The "State Inspection" bills, of course, are only nominally in the interest of better inspection; their real purpose being to cripple the business of dressing cattle in the west at the principal centres, and distributing them in refrigerated cars. Some of the Texas and other western rangemen, whose cattle would not be suitable to peddle out at small, scattering, state markets, are beginning to oppose the State inspection plan. Their cattle are usually marketed in large numbers, are very wild, and oftentimes only suitable for canning. And the State inspection plan would be death to beef canners, because, under the proposed laws, canned beef could not be sold in the United States, and other countries would be slow to buy what one state would not receive from another.

However, a meeting of representatives of several state legislatures has been arranged to occur at St. Louis, March 12, for the purpose of investigating the alleged beef and pork combines.

Whatever or whoever is to blame, the farmers and producers are getting rather the worst of it all around, and they are ready now to do something desperate. On general principles, the farmers are down on big moneyed concerns, and the dressed meat establishments do not escape.

A Wisconsin man has discovered, or invented, a chemical compound by which he prevents the least sign of a horn appearing on a calf's head. The appearance of a six months' old specimen, examined by the writer, was as devoid of horn on one side as a natural Poll; on the other side, which was purposely not treated, was a finely developed horn. If the compound stands the test, (and the man is now successfully treating his second crop of calves,) it will cause a revolution in dehorning, and the Shorthorns and Herefords can, in a few generations, be made hornless.

Ontario Sheep Breeders' Association.

As announced in our last issue there will be a meeting of sheep breeders held on March 13th, at the Albion Hotel, Toronto. The meeting will open at one o'clock p.m., when the following programme is expected to be rendered:—

- 1—Formulating and adopting a Constitution and By-laws.
- 2—The Flocks of Ontario: Can they be Profitably Increased? By Mr. John Dryden, M. P. P., Brooklyn.
- 3—The Proper Management of Breeding Ewes, from September to June. By Mr. J. C. Snell, Edmonton, Ont.
- 4—Sheep Breeders' Need of Better R. R. Accommodation. By Mr. Robert Miller, Brougham, Ont.
- 5—The Sheep Best Suited for the Export Trade and Home Consumption. By Mr. E. B. Morgan, Oshawa.
- 6—The Most Suitable Wool for Canadian Manufacturers. By F. L. Towke.
- 7—The Advisability or Otherwise of Establishing Sheep Records in Ontario. By Mr. John Jackson, Abingdon, Ont.
- 8—How to Grow Large and Well Matured Lambs at an Early Age. By John Campbell, Woodville, Ont.

Arrangements have been made with the G. T. R. and C. P. R. to allow all parties attending this meeting reduced fares to Toronto and return. Those who wish to attend will be furnished with railroad certificates by applying to F. W. Hodson, London, Ont.

The Spring Stallion Show of the Clydesdale Horse Association is held on the following day. This will afford farmers a cheap and easy means of attending both meetings. Those wishing certificates should apply for them at an early date.

Cairnbrogie's Clydesdales.

Cairnbrogie is one mile west of Claremont Station and Post Office, which is twenty-five miles east of Toronto on the C. P. R., and is the home of those youthful, successful, and popular breeders and importers of Clydesdales, Messrs. Graham Brothers, though young in years, they have had a long experience in breeding and importing, and have been associated with Clydesdales from their earliest youth. This, in a measure, accounts for the success they have achieved in past years and are still achieving. Their stables at present, contain eighteen Clydesdale stallions, ten Clydesdale mares, and two English Hackney stallions, all are of very high quality and breeding, space permits us to make mention of only a few. Fitz James (5763), foaled May, 1886, bred by Mr. John Little & Son, Twynholm, Scotland, sire Lord Marmion (2620), dam Bet II of High Borgue, is a very good horse, smooth, even and full of quality throughout.

Macmath (6050), foaled May, 1886, bred by John Montgomery, Twynholm, sire Macfarlane (2788), dam Helenslee (4912), is a very growthy, excellent jointed, thick horse, close to the ground, with shoulder set so as to give his legs free and easy play; his body is grandly ribbed and nicely rounded, which, combined with his well muscled quarters, gives birth to the conclusion that he will prove a getter of stock of superior stamp.

MacBean (6030), foaled May, 1886, bred by James Robertson, Kirkcudbright, sire McGregor (1487), first dam Darling Twynholm (2884). This is a truly magnificent colt, perhaps the most complete horse now in the stables, he is low and thick, with good bone, feet, legs and pasterns. The only time he has been shown was at Stouffville Agricultural Society's Show, where he secured first in the two-year-old class. His brother, McCall (5189), gained first prize at the Royal of England, at Norwich, in 1886.

Southern Cross (7273), foaled July, 1886, bred by Adam Grey, Kirkcudbright, sire Goldenberry (2828), first dam Bell Dunlop (5429), is a big, growthy, gay colt, not in high condition and quite coltish in appearance. He is blocky, and possesses a shoulder indicative of great power, with a barrel ribbed to perfection. His loin is heavily muscled, and his quarters are deep and full, in conjunction with excellent bone and superb quality. He moves well; his breeding is good.

MacClaskie (6996), foaled April, 1887, bred by Lords A. & L. Cecil Inverleithen, sire Macgregor (1487), first dam Kelpie (2034), Messrs. Graham call this their best horse, he certainly is a very good one, and is a thick, muscular, even colt, with a tremendous chest and shoulders, although large, the quality of bone, legs, pasterns, hair and feet are extra good; his carriage and action are also good, and his breeding all that the most fastidious could desire. He won first at the Royal Agricultural Society of England, at Nottingham, and third prize at Edinburgh, in 1888; second prize at Toronto Industrial Exhibition, first at Uxbridge Agricultural Society's Show, and first at Stouffville Agricultural Society's Show. Kelpie (2034), was a noted prize winner; she gained second prize at the R. A. S. S. at Kilburn, London, in 1879, and third at the same Society's Show at Carlisle, in 1880, also fifth the same year at the H. & A. S. show at Kelso.

MacLaurin (7020), foaled July, 1887, bred by Miss Muir, Ford, Castle Douglas, sire Macgregor (1487), first dam Trem of the Ford (7666). This is a wonderfully massive, even colt, on short, good legs, with good bone and plenty of muscle. Straightforward and easy-actioned, he gives every indication of proving of great utility in the near future, an assertion upborne not only by his excellent individual merit, but also by his superior breeding. He won first at Port Perry Central Exhibition, and first at Goodwood Agricultural Society's Show.

Another yearling stallion Kinraig (6879), bred by Andrew Montgomery, Netherhall, Castle Douglas, sire Prince of Airs (4641), first dam Manfielda (6618). This is a somewhat stronger colt than the last, of good quality throughout.

Among the older horses is Lord Armadale (5975), foaled 15th of June, 1885, bred by John Waddell, of Inch, Bathgate, sire Young Duke of Hamilton (4122), dam Mons Meg (4221), by Crown Prince (207), second dam Mye (672), by Prince of Wales (670), third dam Jess, by Prince Royal (647). This is a large, good horse of superb breeding, being descended on the side of both dam and sire from a long line of prize winners. During the last few months this horse has grown out wonderfully. From his rich breeding he is destined to make his mark, as one of the best breeding stallions imported.

Blacksmith (5551), foaled 1885, bred by Alex. Nivision, Dalbeattie, sire Charmer (2014), is a rather finer horse than some of the others; he is of good quality throughout, very stylish, and a good mover.

Pride of Corsock, foaled 1884, bred by Robt. Muirhead, Dalbeattie, sire Michael (1530), first dam Sally of the Black Hills (282), is a massive, short legged horse, deep and round in the barrel, strong in the shoulders, and has well set and well feathered legs. His movements would fill the eye of even a Scotchman.

Jessie Macgregor, vol. viii., foaled 1885, bred by W. C. Booth, Yorkshire, sire Macgregor (1487), dam Bonnie Scotland (4430). This is a beautiful type of a modern Clydesdale, close to the ground and massive; her action and style are good. She won first at Toronto Industrial, first and sweepstakes at Ontario Central Fair, and first at each of the following shows:—Markham, Goodwood, Uxbridge, and Stouffville, and medal at the last place for best mare any age, all in 1888. She is a half sister to MacBean (6030), and is much like him in quality.

Local Gem, vol. vii., foaled 1883, bred by Wm. Lawson, Linlithgow, sire Sir Michael (1530), first dam Rosie (3711). This is, perhaps, not quite as good a mare as the last named, but is, indeed, a very good one; full of quality, massive and close to the ground; her feet, legs and pasterns are grand, and her action particularly good. They have eight other young mares, one and two years old, of similar quality, all having the same characteristics; all are neat, compact, massive and close to the ground; the colors are good; the quality of the bone, hair and legs is very uniform; the legs are flat and hard, and the pastern and feet good. They may be described, as a lot, as being of good size, full of quality and finely bred.

Last summer when in England they selected two Hackney stallions, viz.: Dorrington II. (956), color chestnut, foaled 1883, bred by J. P. Crompton, Hull, sire Denmark (177), dam St. Giles (687). This is a most beautiful horse, a true English Hackney, standing 15.2 hands. All the outlines of his body are most beautifully defined, neat, handsome, gay, full of spirit yet manageable; his action cannot be excelled and is seldom equalled; yet handsome and speedy as he is, he is compactly and strongly built; his back, loin and muscular development are unusually good. He is certainly a great acquisition to Ontario; his colts should be a better class of roadsters than we have ever had before in this province.

The other is Lord Roseberry (1307), color chestnut, foaled 1885, bred by Wm. Ushaw, Hull, sire Lord Derby II. (417), dam by Denmark (177). This is a more rangy horse than the last, standing 15.3 hands. He also is a good horse and speedy, making a fine appearance and stepping off well.

Lack of space prevents us in this case, as in others, going more fully into detail. We regret much having to leave many fine horses and mares in these stables without a word, and only a passing glance at any; yet what we have written will give our readers some idea of the excellence, both in breeding and otherwise, of Messrs. Graham's stock. Their catalogue can be had on application, and, like Messrs. Beith's, it ought to be in the hands of every Clydesdale breeder in Canada. It is full of valuable information, giving the history of many of the most noted Clydesdale stallions. The pedigrees are

all given in a frank, straightforward way, every thing being made plain, with no attempt to deceive, but rather to instruct. Our visit to them was of a most pleasant nature which will be the experience of all who call at Cairnbrogie.

These gentlemen were the importers of Macqueen (5200), which has created such a talk in the U. S. At the late Chicago show he won the grand sweepstakes over all ages and all breeds. He is now the property of R. B. Ogilvie, Madison, Wisconsin.

Third Annual Meeting of the Dominion Ayrshire Breeders' Association.

The Dominion Ayrshire Breeders' Association opened their third annual meeting in the Albion hotel on February 6th. There were present Geo. McCormick, Rockton, President, in the chair; Henry Wade, Toronto, Secretary; A. M. Smith, Simcoe; W. M. Smith, Fairfield Plains; Thomas Guy, Oshawa; David Nicol, Catarqui; William Spiers, Cobourg; Caldwell Bros., Orchardville; A. Gerrard, Hamilton; W. C. Edwards, Rockland.

The President, in opening the meeting, referred to some of the qualities of the Ayrshires as dairy animals, namely, compactness and symmetry of form, and power to make large returns of milk for the food consumed. He also spoke of the discredit into which the breed had fallen by disreputable people who sold inferior animals for thoroughbred Ayrshires. But now the Ayrshires, he said, are getting to be appreciated as they deserve.

The Secretary, Mr. Henry Wade, read the second annual report of the association. It stated that although the standard of admission to the Herd Book had been raised, entries were coming in freely. This new standard had been made widely known by circular. The demand for Ayrshire cattle was found to be increasing, and one large importation was made during the year. The association was confident that their favorite breed will soon become the leading dairy cattle. There are now recorded in the first volume of the Herd Book, 1,002 cows and 492 bulls, and in the appendix 241 cows and 126 bulls, making a total of 1,861. These have been brought into vol. I of the new series since last annual meeting, while many more will be recorded during the year. It is the intention to close vol. I with the entries received during this year. The number of members is now 31. The financial statement showed \$79.50 receipts, with no expenditure.

The following were named as competent persons to be judges of Ayrshires at the Industrial Exhibition:—William Crawford, Malvern; James McCormick, Rockton; James Anderson, Guelph; John M. Jones, Bowmanville.

The following officers were elected:—President, David Nicol, Catarqui; Vice-President, David Morton, Hamilton; Executive Committee James McCormick, Rockton; Thomas Guy, Oshawa; H. Caldwell, Orchardville; A. W. Smith, Simcoe; Joseph Yuill, Carleton Place; W. M. Smith, Fairfield Plains Auditors, J. C. Snell, Edmonton; William Spiers, Cobourg.

Thomas Guy and James McCormick were elected representatives to the Board of the Industrial Exhibition. Messrs. David Nicol and M. Ballantyne, St. Mary's, were elected delegates to the Central Farmers' Institute. The meeting then adjourned.

J. E. Neyland says he read in the F. A. to keep his cattle out of the cold and he did so, and they gained 50 lbs. on half the feed. He used to have to buy hay and now he has it to sell.

The su
1886, br
deen, Se
Davidson
1st dam
Knowlem
Allan (21
well kno
came the
duced m
used in
guarantee
rank hig
record at
Scotland.



imported o
horns from
have given
intends to r
fall, perhap
made. At
Cruickshank
November
Mr. Geo. I
from import
sold him in
now in her
sixteenth c
sold descen
\$3,800, and
Davidson in
Village Girl
and several
the Canadia

Imported Knight of the Garter (53094).

The subject of our sketch is red, calved April, 1886, bred by A. Cruickshank, Sittyton, Aberdeen, Scotland, the property of Mr. James I. Davidson, Balsam, Ont., sire Dunblane (47792), 1st dam Rose of Knowlmore, by Knight of Knowlmore (22055); 2nd dam Red Violet, by Allan (21172), 3rd dam Violet. This family is well known, being the oldest at Sittyton. It came there in 1837, and since that time has produced many bulls that have been extensively used in the herd. If showyard honors are a guarantee of merit, this family certainly must rank high, very few tribes showing the same record at the leading shows of England and Scotland. Mr. Davidson in past past years has

cows as these demonstrate the great value of the Cruickshank cattle. Mr. Davidson, as well as his son, Mr. John Davidson, have long been well known as breeders of good Clydesdales, and have many times won showyard honors. At the present time they have some good young stallions and brood mares on hand. Among the mares is Boydston Lass (2388), which with her colt last fall won the FARMER'S ADVOCATE pitcher, given at the Ontario Central for the best draft mare with foal by her side. A yearling and a two-year-old stallion, owned by Mr. John Davidson, have also distinguished themselves in the leading show rings of Ontario.

Ideals in Stock Raising.

BY JOHN DRYDEN, M. P. F.

Few men in life accomplish great results without some settled purpose—without some definite

tion by the exercise of his literary talent without some definite idea of what he proposed to accomplish. Without some settled conviction, some clear results to be reached, his effort could never command attention. The sculptor or painter could hardly be expected to astonish the world by his art unless he knew beforehand what he sought to produce. Neither could the builder erect a perfect building without some design or plan matured as an ideal in his own mind, or committed to paper from the mind of another.

These are surely self evident statements, and is it not equally evident that the breeder must inevitably fail unless he, too, sets before him some design, some ideal to which his aim is constantly directed. He may not reach his ideal. Obstacles and difficulties will constantly present them-



Knight of the Garter (53094)

THE PROPERTY OF MR. JAMES I. DAVIDSON, BALSAM, ONTARIO.

imported one hundred and eighty-five Short-horns from the famous herd at Sittyton, which have given such good satisfaction that he intends to make another large importation this fall, perhaps the largest and best he has ever made. At the present time he has twenty Cruickshank Shorthorns in his stables. In November last he bought three females from Mr. Geo. B. Bristou, Rob Roy, all descended from imported Village Girl, which Mr. Davidson sold him in 1875 for \$1,000. Village girl is now in her eighteenth year, and will drop her sixteenth calf next month. Mr. Bristou has sold descendants from this cow amounting to \$3,800, and has a good herd of them left. Mr. Davidson imported Rosemary the same year as Village Girl. She has produced fifteen calves, and several of them have never been beaten in the Canadian or American show rings. Such

object is kept before them. In no calling does this rule apply more directly than in the breeding and rearing of domestic animals. Past history records the results of the life work of men now known the world over, who, following this vocation always kept before them some ideal at which they were aiming. Bakewell, Colling, Mason, Bates, Booth, Cruickshank, and others, whose names are familiar in breeding circles, all have achieved success, and in each case for the same reason.

An ideal animal was in the minds of these men, and every effort was directed to produce in the flock or herd its exact likeness. Evidently the ideal was not the same in every case, for the results were not the same, but the success of each was measured by the nearness of approach to the standard set up.

An author could not hope to produce a sensa-

self. Disappointment will tend to discourage and dishearten. Yet the fact remains, unless the ideal is there, everything is governed by chance and haphazard. In the end he is sure to lose all that may be temporarily gained.

Is it not true that our Canadian farmers need much education and direction in this line? How few there are, who, when they have determined to make a purchase, have any definite idea what their purchase ought to be like. How few there are who are qualified to make a selection necessary to achieve success. How great is that number who simply buy because another man buys; who blindly follow the tastes and notions of others, when they may not know to what end their course is tending. They may have a partial ideal, but it is not founded on *well considered reasons*. It is not accepted because of its especial fitness for their circumstances. Hence

you so often witness a great lack of independent decision.

Who has not visited the sale ring, where by common consent, good animals were selling at very reasonable prices, where men were found who needed just such animals, and yet who refused to offer a single bid. If they would tell you the reason, it would be that they had not noticed certain others bidding, and therefore they did not consider it safe for them to do so.

Or, perhaps, the exact animal is offered answering the description given of their needs, yet they refuse to buy. When questioned as to the reason, the color is not right. What difference will the color make in your line of breeding? This question they cannot answer except by asking another:—"Red is considered a better color, is it not?" What is your object; what are you breeding for? Oh, I want to breed steers for the market. Will red steers sell any better or make any better beef than those of another color? This question cannot be answered satisfactorily, but the impression has been borrowed from another, and accepted without the least consideration, that the roan is not the right color, although no reason can be assigned for it by anybody. What is wanted in such a case is an ideal, and such a definite reason for the ideal as will produce independent action, no matter what others say or do.

If the farmer is a breeder of cattle for dairy purposes, his ideal animal must be very different to that of the man whose main production is beef; or, if he desires a combination of the two, he may choose something different from either; but his mind ought to be clear, and his knowledge sufficiently definite, to easily distinguish between what approaches his ideal animal, and that which tends in an opposite direction.

Our young men especially need educating in this direction, so that a given course being decided, they may know when they see what is needed for their purpose.

We ought to look to our Agricultural College to impart to her students this special knowledge; but as a means for reaching the mass of our farmers, no better educative medium can be afforded than the Farmers' Institute. Experience may be a dear school, but it is safe and reliable. At these gatherings each is enabled to profit by the experience of his neighbor, and so aided to establish in his own mind the ideal animal, to produce which will bring to him undoubted prosperity.

Dressed Meat Monopoly.

The Beef Producers' and Butchers' National Association of the United States, are making preparations to have bills introduced into most of the State Legislatures this winter, requiring all animals slaughtered in said states to be there inspected on foot, previous to slaughtering. This is acknowledged to be a move against the dressed meat monopolists of Chicago, who have for some time held a monopoly of the fresh meat trade, thus enabling them to buy and sell at nearly their own prices; not only driving local butchers out of the business, but demoralizing the beef cattle trade to a great extent. It is claimed that in some instances, the combine find it necessary to sell at very low prices until the local men are driven to the wall, when they advance immediately. Speculation is rife as to the constitutionality of the bill, and strong arguments are brought forward on both sides; and if such measures are passed, their legality will doubtless be tested in the courts. At this distance it looks like wholesome legislation.

Dundas & Grandy's Clydesdales.

Cavanville is a station on the C. P. R., 64 miles east of Toronto, in the County of Durham, and is two miles from Mr. Dundas's home, "The Lowlands", which contains 350 acres of rich grazing land, well watered by a never-failing spring brook. We found Mr. Dundas to be a keen, shrewd business man, but very generous and kindly, altogether a capital fellow. His home and surroundings are snug and neat, and his Clydesdales a good lot, very even in color, most of them having but little white; all but one are thick, massive, short-legged animals, with good feet, hard legs, well feathered with silky hair. Their ideal of a Clydesdale seems to be a massive, easily-kept horse, on short, flat hard-boned legs, with good feet and pasterns, and they seem to have found pretty much what they sought. Mr. Dundas does all their feeding when it is possible to do it, and has the art down to a fine point. All his horses are just in that condition when they look at their best. His favorite is General Wolfe [S44], foaled May, 1886; bred by George McLaws, Lanark, Scotland; sire, St. Lawrence (3220). He is a stylish, upstanding fellow; thick and compact; good in the rib, quarter and back; his feet and pasterns are extra, altogether a very promising horse throughout. Before leaving Scotland, he won several premiums. St. Lawrence won the Glasgow premium in 1882 and 1883; his sire was the famous Prince of Wales (673).

Glenorchy [716], foaled May, 1886; bred by Wm. Stewart, Howwood, Scotland; sire, Bredalbane (1978). This is also a thick, solid, short-legged horse; neat and well finished, with very hard, flat bones; good feet and pasterns. He moves well, is quite stylish, and is what is known as an "easy keeper." We would expect him to transmit this quality to his offspring. At Kilbride, Scotland, in June, 1887, he won first in his class and sweepstakes over all ages. In 1888, he was first in his class at the Canadian Clydesdale Association Show, as well as at several other exhibitions. His sire and grandsire were prize winners.

Mariner [718], foaled April, 1886; bred by Wm. Tompson, near Glasgow, Scotland; sire, Lord Hopetoun (2965). A well-bred, strong-boned, straight colt; not as deep in the body as some of the others, yet stronger and more growthy. He was a winner as a two-year-old at the Clydesdale Association's Show, March, 1888.

Lord Hopetoun won the Glasgow premium in 1885 and 1886, and was a prize winner at the Highland Agricultural Society's Show in 1886 and 1887.

Macnair [717], foaled March, 1886; bred by John Crawford, Ayrshire, Scotland; sire, Macgregor (1487). This is a wonderfully thick, short-legged colt, with good flat bone. He is naturally very fleshy and easy to keep, and by breeding and quality is destined to produce a lot of easy-keeping, useful farm horses. In 1880, his sire won first and silver medal at Glasgow Summer Show, first at the Royal Show, and first at the Highland Agricultural Society's Show. In 1881, first at Glasgow Summer Show; in 1882, first at Glasgow and at the Highland Agricultural Society's Show.

Ivanhoe (396), the sire of Macnair's dam, was likewise a great prize-winner; he was sold in 1879 to go to Australia for 1,500 guineas.

Kilmaurs (5912), foaled May, 1886; bred by Thomas Clachan, Ayrshire, Scotland; sire, Lord Erskine (1744), is the most rangy horse in the stables, and bids fair to be large and showy when matured. His sire, the famous Lord Erskine (1744), was the winner when three years old of the silver cup at Glasgow, and is said by many to be the best sire, take him all in all, in Scotland at the present time. At the Glasgow Show of 1887, five two-year-olds of his get were first. In 1888 five yearling colts, also sired by him, were first at the Highland Society's Show.

Jeanie Rae [554] foaled April, 1886; bred by Angus Macdonald, Campbelltown; sire, Old

Times (579). This is a well-bred, blocky, wide made filly, with splendid quality and flat bone, abundance of silky hair, and very fine action. In Scotland, she won second prize in a very large class of yearlings at Campbelltown; second at Erskine, in June, 1887, and also winner of first at the Provincial Exhibition, 1888. Old Times won first prize at Glasgow Agricultural Society's Show in 1872, and was the Knockdon stud horse. His excellent breeding qualities are a household word throughout the whole of Scotland.

Lady Renwick [655], foaled May, 1886; bred by Walter J. Harkness, Dumfries; sire, Lord Erskine (1744), dam by Prince of Wales (673). Is a good and well-bred filly. She is large and smooth, and has good feet, legs and pasterns, and moves well. She won first at the last Provincial Exhibition.

Lothian Gem [656], foaled May, 1886; bred by Wm. Neilson, Kilmalcolm, Scotland; sire, West Lothian (4110). This is a short-legged, thick, massive filly, with good legs, pasterns and feet. In Scotland she won first prize in the yearling class for fillies, and sweepstakes for the best against all ages at Kilmalcolm, in June 1887; also second at the Provincial Exhibition, Kingston, 1888. West Lothian won the West Lothian premium in 1885. His sire, the famous Duke of Hamilton, will long be remembered by Clydesdale fanciers, having sired a goodly number of Glasgow prize-winners.

Besides the preceding ones, this firm have several others; one a yearling colt, General Arthur, vol. xi, sire Doncaster (238), winner in 1874 of the Highland Society's silver medal for best horse on the ground. General Arthur is a colt of nice quality, with good bone, feet and pasterns, and very promising. He is full brother to the famous General Neil (1145), which is said to have few equals in Scotland as a show and breeding horse. He gained the premiums for Glenkens, Bainagie and Parton District in 1878, and for Bute in 1879, and third prize at the Kilburn International Show of the Royal Agricultural Society of England in 1879.

Also five yearling fillies, sired by Sir Hildebrand (4024), winner of first prize at the Royal Show, 1886, and Lord Hopetoun (2965). All these fillies are finely bred, and much prized by their owners. The most worthy of mention are: Maid of Bardraing, which in Scotland won first at Erskine, second at Kilbride, also first at the last Ontario Provincial; Hatton Fancy is a promising and well bred filly, her dam is the dam of the famous Lord Erskine, and Forest Queen, which is a broad made, good colored filly with a very long pedigree. We would advise those interested to write for the catalogue containing their pedigrees. Address Messrs. Dundas & Grandy, Springville P. O., Ont.

Draught Horse Association.

The Canadian Draught Horse Association held their annual meeting in the Bureau of Agriculture rooms recently, Mr. F. T. Coleman presiding in the absence of Mr. Chas. Jackson, the President. The Secretary, Henry Wade, presented his report. During the year there were recorded 200 animals, making now 202 horses and 270 mares to be printed in the forthcoming stud book. It is the intention to print these registrations in connection with the stud book of Shire horses. The association has now twenty-six paid-up members. A balance of \$78 was reported, which will be spent in the distribution of the stud book to members. The members for 1888 will be carried over to the list for 1889, that all entitled to the new edition of the stud book may receive one.

The following officers were then elected:—President, F. T. Coleman, Arthur; Vice-President, Alfred E. Keffer, Concord. Directors—John Guardhouse, Highfield; Charles Lawrence, Collingwood; John Vipond, Brooklin; Dugald McLean, York Mills; Thomas Natrass, Macville; W. Owens, M. P., Lachute, Que., and L. F. Page, Concord. The association will meet again at the call of the President.

I will
the other
the estim
1887, I fi
in Ontari
milk sent
The 339
showed t
of chees
creamerie
cents pe
gave a sm
than rep
milk.

average
round n
dairies th
of butter
price for
show. (C
milk for
average;
of privat
last long
days, so
This is
produced

What
On an a
when tw
to that
turned o
that it c
years.
summer
months
would co
Thus sh
and also
farmer s
year for
is not a
produce
cows che
is count
How c
increas

(1) TI
a small
is to wa
quires a
in a goo
to make
milk is
in conv
more fo
milk.
given go
food, or
and her
Some
ration.
is too n
has not
make m
food, an
gradient

First Prize Essay.

WHAT PROFIT IS DERIVED FROM THE AVERAGE CANADIAN DAIRY COW? HOW CAN THIS PROFIT BE INCREASED?

BY D. E. SMITH,

Credit Valley Stock Farm, Churchville, Ont.

I will calculate for Ontario, and conclude that the other Provinces are about the same. Taking the estimates of the Bureau of Industries for 1887, I find that there are 748,321 milch cows in Ontario. Of these 213,723 cows have their milk sent to the cheese factories and creameries. The 339 cheese factories that gave returns showed that each cow yielded 17.6 cents worth of cheese per day for 159 days, and the 23 creameries showed that each cow gave 12.65 cents per day for 128 days. The creameries gave a smaller return per cow, but this was more than repaid by the farmer keeping the skimmed milk. We can therefore safely say that the average product of the 213,723 cows was in round numbers 17 cents per day. In private dairies there would not be as high a percentage of butter obtained from same quantity, and the price for butter would be lower as actual results show. Cows, on the other hand, that produced milk for cities and towns, would have a larger average; this would make up for the decrease of private dairies. This 17 cents per day would last long enough to call it an average for 200 days, so that the year's product would be \$34.00. This is what the average Canadian dairy cow produced per year.

What has it cost to have her produce this? On an average, dairy cows drop their first calf when two and a-half years old, and their cost up to that time would be from \$35 to \$40, and if turned off to beef should bring \$35 to \$40, so that it can be reckoned only during her milking years. She would cost during six months of summer \$1.50 per month, or \$9; during six months of feeding, at 15 cents per day, she would cost \$27, making a total of \$36 per year. Thus she cost per year \$36, and produced \$34, and also made a quantity of manure. Thus the farmer sells the produce of his land, pays \$2 per year for manure, and gives his work in. This is not a very satisfactory way of selling the produce of the farm. Some may keep their cows cheaper, but many pay more if everything is counted.

How can this profit be increased? It can be increased by:—

1st.—ECONOMY IN FEEDING.

(1) There is no economy in giving a milch cow a small quantity of food. To feed her sparingly is to waste food. This is easily shown. It requires a certain amount of food to keep the system in a good, healthy condition. What is over goes to make milk; if little is over, then the yield of milk is small, and there is no profit, but a loss, in converting the food into milk—whereas, if more food were given, it would go to increase the milk. It is said that two-thirds of the food given goes to keep the animal alive. Innutritious food, or food given too sparingly, injures the cow, and her yield is not profitable.

Sometimes cows are fed an unevenly balanced ration. There is a sufficient quantity, but there is too much of one ingredient, so that the cow has not sufficient material, of a certain kind, to make milk. The milk is taken entirely from the food, and if the food is partly deficient in one ingredient, the cow must either eat a very large

quantity, in order to get enough of this, or give a smaller quantity of milk. She frequently does the latter. Roots and straw alone are largely deficient in albuminoids. This is the part that is changed into casein in milk. A ration made up of roots and straw is very weak in albuminoids, and hence it would require a large quantity to make the casein in the milk. A little bran added would greatly improve the ration, because the bran is rich in albuminoids; or a ration may be too rich in albuminoids, as when there is a quantity of flax-seed, rape seed, cottonseed, meal, etc., etc. There is nothing like variety in feeding for milk. Milk, as every one knows, contains a variety of ingredients, and these must be taken from their food; hence it is very important that the ration should contain a variety of foods.

I will give a few rations that are evenly balanced and satisfactory, because they have been tried and give good satisfaction. These have been used by farmers, breeders, and dairymen:—

- (a) 16 lbs. meadow hay,
- 8 " wheat bran,
- 2 " ground oil cake,
- 6 " corn meal.

The wheat bran and ground oil cake are strong in albuminoids, and the corn meal is weak in these; the two former are not so strong in the carbohydrates as the corn meal, so that there is a proper quantity of each and a variety.

The following is taken from the "Country Gentlemen":—

- (b) 10 lbs. of clover and timothy,
- 9 " corn fodder,
- 10 " mangels and carrots,
- 5 " corn meal,
- 10 " wheat bran.

This is better for flow of milk than for butter.

Here is another:—

- (c) 20 lbs. cut hay (clover),
- 10 " bran,
- 15 " roots.

The following was given by a leading dairyman and found very satisfactory:—

- (d) 25 lbs. corn ensilage,
- 2 gals. meal (2 parts oats, 1 part peas),
- 15 lbs. roots,
- 15 " straw.

A leading breeder and dairyman of Nilversum Farm, N. W. T., feeds as follows:—

- (e) 1 gal. bran,
- 1 " meal (½ barley, ½ oats),
- 1 pint oil cake,
- Loose prairie hay and turnips,

John Gould, of Ohio, fed with satisfactory results the following ration. He is a prominent dairyman, and a man that has both eyes open when it comes to economy in feeding. He feeds:—

- (f) 55 lbs. corn ensilage—cost in Ohio... 1½c.
- 3 " clover hay—cost in Ohio... 1c.
- 6 " bran—cost in Ohio... 5c.

Total..... 7½c.

The following I consider the cheapest and best for most parts of Ontario; it is a large and evenly balanced, and, perhaps the most economical for the strength of it. With small cows it may be much diminished:—

- (g) 50 lbs. corn ensilage—cost... 2½c.
- 3 " chopped oats " ... 3c.
- 3 " ground peas " ... 3c.
- 6 " bran—cost... 4c.
- 5 " clover hay—cost... 2½c.

Total..... 15c.

Twelve, or even ten cents worth of this mixture would be a good day's feed for the ordinary milch cow. We find that by feeding ensilage, we can save from ten to twelve cents per day in the cost of the ration.

[TO BE CONTINUED.]

More Canadian Hogs Wanted.

BY WM. DAVIES, TORONTO, ONT.

Without expressing any opinion on the question of free trade with the United States, it does seem anomalous that thousands of farmers should be so anxious for it and regard it as the "philosopher's stone," to turn all they touch into gold, while they have a gold mine almost unworked at their doors. This gold mine is the raising and fattening of swine for the Canadian market. Our senior commenced pork packing in the city of Toronto in 1854, and in 1860 commenced to export the product to England, and has followed it continuously ever since, but always at a great disadvantage, compared with American packers, from the insufficient and irregular supply of hogs. In 1887 we killed 63,457 hogs, of which less than half were Canadian. We should have been only too glad to have got our full complement in Canada. First, we are patriotic enough to wish to leave the money in our own country; second and last, but not least, the quality of the meat of Canadian hogs is very superior to American, and for this reason we pay a higher price for them, and we can get a higher price in England for the product. Canadian bacon is beginning to be appreciated in England, but the small and fitful supply prevents it gaining the position it is entitled to. Our agents talk it up and induce the provision men to give it a place on their counters with Irish and Danish, and they in their turn persuade their customers to try it, but by the time a fair trade has been worked up the supply, always small, ceases, and the next season the ground has to be gone over again. We do not at this time propose to go into the question as to the most desirable sort of hogs, but will leave that for another time. The point we now want to urge on the farmers of Ontario is that we want five times as many hogs raised and fattened as are now produced. We are informed that in Denmark and Sweden this branch of farming has received a wonderful impetus in the last four or five years. Denmark has taken the front rank for years with her butter, and she is fast coming to the same position with her hogs and bacon, both in quantity and quality. Now some of your readers may say, if the supply of hogs is increased the price will be lowered in proportion. We do not believe this would follow, and we will give you our reasons:—

1st. The National Policy appears to be acquiesced in by the Canadian people. This interposes a 20% barrier to competition from the United States, and the same is in general terms true of the product, so that Canadian farmers have their market to themselves.

2nd. The demand from Ottawa and Montreal is increasing every year, and we are assured that competition by the farmers of Quebec is out of the question.

3rd. Modern appliances and system of curing has enabled the pork packers to produce an article of such superior quality and flavor that consumption by all classes is steadily on the increase. This is the case all over the world, excepting of course the tropics.

4th. Lastly, the English market will always act as a safety valve—any overplus can always find a market there. We are prepared to handle 2,000 per week, and are ready to enlarge our facilities as soon as the supply warrants it.

And now to the question of swine raising profitable? Without hesitation we say yes, and we think more so than any other farm stock, and we give our reasons:—1st. We are assured this is so by a number of intelligent farmers. 2nd. Consider how small an amount will purchase a breeding sow compared with a cow. 3rd. How quick the return. At fourteen months old she will present you with from six to ten pigs; these want no attention beyond feeding and caring for the mother, and at six weeks old, suppose if you must sell them and only get \$1 each, you are well paid, and this can be repeated within the year. But, assuming the pigs are fattened, they can, with good care, be made to weigh 150 lbs. alive at six months old, which, at 5c. per lb., is \$7.50. 4th. Consider the ease of marketing compared with cattle. You can sell them direct to any respectable pork packer by writing them. We have had them sent us frequently by persons whom we have never seen. 5th. Consider the regularity of the market; it does not vary as does the cattle market with the supply, and drop 50c. per hundred pounds, if there are a few extra cars received on any one day. 6th. Bear in mind that mutton and beef is weighed without the head and feet, while with pork these are a part of the carcass. We could enlarge but think we have said enough to arrest the attention of those who read, and we hope, ere long, to take up the question of the most suitable breed. Meantime, we say, let us have them of some breed, or even mongrels.

The Holstein-Friesian Association.

As our readers know, we have several live-stock associations in the province, which are, no doubt, doing a good work in promoting and conducting records; but none of them have yet reached their full growth in usefulness. Conducting and managing records is of great value to the country. Without properly kept records, none of our various breeds of live stock can be perpetuated or improved. It matters not where these records are edited as long as they are properly kept and of easy access to our people. But live stock associations we must have in our midst; the duty of these, besides managing records, should be to hold open meetings, when all interested will be invited; good and instructive papers, prepared by practical men, should be read and fully discussed. We have now arrived at a time when each of our existing associations should take up this work and hold such a meeting, at least once a year—twice a year would be better. Some of the Shorthorn breeders have been in favor of their association holding such an annual meeting. But it has remained for the Holstein-Friesian Association to announce the first meeting of this kind. They will meet in Guelph on March 12th, at which the following programme is expected:—

1. The Future of Holsteins in Canada. By R. S. Stephenson, Ancaster, Ont.
2. The Holstein—The Farmers' Most Useful Dairy Cow. By A. C. Hallman, New Dundee, Ont.
3. The Dairy Farm, and Milk, and Butter-production of the Holstein Cow. By H. Bollert, Cassel, Ontario.
4. The Quality of Holstein Milk. By D. E. Smith, Churchville, Ont.
5. Merits of Holsteins. By J. Urquhart.
6. The Holsteins, as a General Purpose or "All-round" Animal. By J. Gifford, Meaford.

Besides the papers, there will be discussions on them and on other subjects. We hope some of our other associations will not be slow to follow the example set by the Holstein breeders. A great amount of good must be accomplished by such meetings, both to the members, the general farmers, and to the separate breed, which is thus brought prominently before the public.

Robert Beith & Co.'s Clydesdales.

The name of this firm has become famous, and a household word wherever Clydesdales are bred in America. They are also well-known in Great Britain as the purchasers and importers of some of the best horses that have left their native land. At the present time these gentlemen claim that they have the best stable of Clydesdale stallions in America—they certainly have a grand lot of horses, large and muscular, and of noble appearance.

The first horse shown us was St. Gation (3988), by Old Times (579). This is a beautiful, even horse, weighing 2100 lbs. His bone, color, muscular development, style and action are splendid. He is considered by many to be the best horse in America. In 1885, when a two-year-old, he won first at Linlithgow and Bathgate; in 1886 and 1888 he was drawn in the short leet at the Glasgow stallion show, and in 1888 he won the Buchan District premium and was also commended at the Highland Agricultural Society's Show. After being imported, he won first in his class and diploma for best Clydesdale stallion any age at the last Provincial Exhibition, and at the last Toronto Industrial he captured the same prizes, also the sweepstakes given by the Clydesdale Association of Canada for best Clydesdale horse, and the sweepstakes for the best draught horse any age or breed. This horse comes by good qualities honestly, for he is splendidly bred.

Bounding Willow (5580) comes next, and rightly named is he. A brown, got by Good Hope (1679), and weighs 2100, but has the grace of carriage and action of the best roadster; his bone is strong, and his muscular development even better than St. Gation's, though he is not as good in the rib or top—few horses are. His feet, pasterns and legs are excellent. He is a great favorite with that well known judge of Clydesdales, Mr. Arthur Johnston. He won second at Ayr and the Upper Nittsdale premium in 1887, and stood second at Glasgow and was awarded the Dalbeattie premium at the great spring stallion show in 1888. Since being imported he won second at the Ontario Provincial and third at the Toronto Industrial, and first at several other shows. He, too, is descended from prize winning stock.

Next comes the famous Granite City (5397), which has been so much talked about by Clydesdale men on both sides of the water. He is a bright bay with a little white on face and on three feet. Foaled May, 1885; bred by David Walker, Aberdeenshire; imported 1887. He weighs 2000 lbs.; in make up he is something between St. Gation and Bounding Willow, being of the same type. His sire is Lord Erskine (1744), one of the most famous horses now alive. Granite City won first prize at Glasgow, second at the Royal Agricultural Society's Show, and first at the Highland Society's Show in 1887. His ancestors are also prize winners and noted breeding horses.

Gay Prince (5796), foaled April, 1885; bred by John Ralston, Stranraer; imported August, 1888. This is also a prize winning horse in Scotland and Canada, and is well descended, but is altogether of a different style from those before mentioned; he is very pretty, neat, and stylish; full of quality all over—just such a horse as is calculated to get a fine, useful, spirited lot of general purpose and farm horses.

Royal Scotchman (5317), foaled May, 1885; bred by A. & R. Brownlee, Newmains; sire, Douglas Chief (2603). This is also a well bred horse, and prize winner in this country as well as in Scotland. In type he is something between the last horse and the previous ones. He is large and showy, but smooth and sweet; his bone is hard and flat, and his feet and pasterns are good; he is a splendid mover, being very active, though weighing nearly 2000 lbs., and he does not seem to jar when trotting, as many heavy horses do. He has the appearance of being easily kept.

Jubilee Model (5902), foaled in June, 1885; bred by John McMeekan, Thirkolm; imported August, 1888; sire, McCamon (3818). This is a very useful horse, weighing 1700 lbs., he is neat yet massive, and is short in the back. His sire (McCamon) has proved himself a very good breeding sire; he won first and champion cup at the Highland Agricultural Society's Centenary Show, 1884, also first at Stranraer, as a yearling and a two-year-old, and was then sold for £900.

Knight of Craighburn (5118), foaled June, 1884; bred by James Flemming, Larbert; sire, Sir Windham (4728). This is a richly bred horse; he is a good mover and a nice, even, straight fellow. In some respects he resembles the last mentioned.

Invader (vol. xi.), foaled May, 1886; bred by Wm. Maxwell & Sons, Carlisle; got by Prince Henry (1257). This is the best two-year-old in these stables—which is saying much for him, for he is surrounded by good ones. He is a strong, growthy colt, weighing 1700 lbs., with lots of good bone, plenty of style and a very good mover; he is finely developed, and is very muscular. His sire has been twice a prize winner at the Royal Agricultural Society's Show.

McRaw (6057), bred by John McRaw, Mar-kinch, Scotland; got by Garnet Cross (1662), is a very smooth, deep horse, with splendid legs and fine finish; he weighs 1700 lbs., and was a prize winner before leaving Scotland, and since imported, he won first at the Ontario Provincial, second at the Toronto Industrial, and first at several other Canadian shows.

General Burnett (vol. xi.), foaled May, 1886; bred by Jas. Smith, Foredown; sire El. Ameer (3591). This is a very thick, massive, short-legged horse, with good feet and pasterns.

Scottish Thistle (6279), foaled in 1886; bred by Carron & Co., Bishopriggs; sire Gallant Lad (2781), which was a first prize horse at the Highland Society's Show and the winner of numerous other premiums, defeating several noted Scotch horses. Scottish Thistle is of superior breeding, and is a very strong boned horse on short legs, with a beautiful front end and good rib.

The Friar, foaled in April, 1886; bred by J. Black, Aberdeen; sire Daruley King (2717). A big, strong boned, good colored colt, and bids fair to be a very large horse when grown.

Pride of Eastfield (vol. xi.), foaled 1887; bred by Richard Dunn, Hamilton, Scotland; sire, Lord Erskine (1744), won the first prize at the Highland Agricultural Society's Show, 1888, and stood at the head of the family of yearlings which won the first prize as best five colts got by a Clydesdale horse. Since imported he won first at the last Toronto Industrial and at several other Canadian fairs. Mr. Robert Beith calls him the best horse of the lot. He is one of the few horses now in America that ever won a first prize at the Highland Agricultural Society's Show. He is smooth and good all over, with extra good quarters and shoulders.

Besides the aforementioned they have Candlesmas (5614) and Clydeside (5656), both are two-year old, and are fine strong colts, suitable as the sires of heavy cart horses. They weigh 1750 and 1800 lbs. respectively, and in quality are much like Scottish Thistle.

Mr. James Beith is now in Winnipeg, where he has taken six imported Clydesdale stallions and six mares. These are a fine, strong, useful, well bred lot, and should and doubtless will be of great benefit to the country where they have gone.

When selecting their last importation of Clydesdales, Mr. Beith bought the English hunter stallion The Gem, foaled 1880, imported August, 1888. Sire, Gem of the Peak, by Mr. Sykes, by Sir Tatton Sykes; his dam by Laughing Stock, by Stockwell; granddam by Sir Hercules; g. granddam by Bravo. Mr. Sykes won the Cesarewitch. Sir Tatton Sykes won the two thousand guineas and the St. Leger. Laughing Stock took the £100 prize at the Royal Show at Wolverhampton, as the best thoroughbred horse. Stockwell won the Derby. The Gem is a beautiful brown horse, standing 16 hands, on short legs, possessing immense bone and muscular propelling power. He has well jointed, clean, flat legs; splendid action; weighs 1340 lbs., and is pronounced by competent judges to be one of the best and soundest horses of the

day. When three years old, he won second prize at the Cheshire Agricultural Society's show in 1883, beating 6 others. In 1884, he won the first prize at the same society's show. In 1886, he took the second prize at the Royal Manchester, Liverpool, and North Lancashire Agricultural Society's show. He also bought the Hackney stallion Firefly, of which we gave an illustration in a recent issue. These are two very fine horses.

Messrs. Beith's catalogue, which has just come to hand, contains the pedigrees of 25 stallions and 6 mares, and contains more information concerning Clydesdales than any catalogue we have ever seen before, excepting Graham Bros'. We would advise all interested in Clydesdales to send for a copy, which will be sent free to those applying to Robert Beith & Co., Bowmanville, Ont. Those who wish to see a truly fine lot of horses should visit this stud. Bowmanville is forty miles east of Toronto, on the G. T. R.

The Science and Practice of Stock Feeding.

BY PROFESSOR G. H. WHITCHER,
Of the New Hampshire Agricultural Experiment Station.

(Continued from last issue.)

The ordinary table would give the previously shown results in the following form:

	Digestible Albuminoids.	Carbo-hydrates.	Fat.
Corn meal.....	8.66	65.63	2.94
Shorts.....	14.17	43.84	3.20

In the tables given in this bulletin I propose to modify this form of statement, with the hope that it will very much simplify the matter of using them in practical work, and I will explain the modification at this point. It is customary to give what is called the *nutritive ratio* of each food. Warrington calls it the *albuminoid ratio*. This means the ratio of digestible albuminoids or nitrogenous matter, to the carbo-hydrates and fat, or non-nitrogenous matter, but as it has been found that a pound of fat will produce 2½ times as much heat, when burned, as a pound of starch or sugar, it has been assumed that the fat in fodders is 2½ times as valuable as the carbo-hydrates for feeding purposes, consequently in determining the nutritive ratio the fat is multiplied by 2½ and the product added to the carbo-hydrates. This has the effect of making the whole of the non-nitrogenous part of the food appear as starch or sugar. An example will best show how this is done. Take the corn meal above tabulated, there are 8.66 pounds of digestible albuminoids; there are of carbo-hydrates (starch, sugar, fibre etc.), 65.63 lbs., of fat 2.94 lbs., multiplied by 2½ gives the equivalent of carbo-hydrate 7.35; the carbo-hydrate equivalent becomes 72.98; the ratio of nitrogenous to non-nitrogenous is as follows: 8.66 to 72.98, or as 1: 8.4. This last is the nutritive ratio of corn meal. The modification alluded to is this: instead of giving the carbo-hydrates and fat in separate columns I shall multiply the fat in each food by 2½ and add it to the carbo-hydrates, and give the sum in one column under the term *carbo-hydrate equivalence*. The reason for this will appear in the practical work of computing rations, under "practical feeding."

The table last given would be changed to the following:

	Albuminoids.	Carbo-hydrate equivalence.	Nutritive ratio.
Corn meal.....	8.66	72.98	1: 8.4
Shorts.....	14.17	51.84	1: 3.6

What are the uses of food in the animal system?

Having considered what food is and finding it made up of parts having unlike qualities, it is very natural to ask if the albuminoids and carbo-hydrates are of equal value, and before this can

be answered, it will be best to see why animals require food. Some of the uses of food may be best explained by comparing the animal to the locomotive. We will take the case of a locomotive, standing idle in the yard, with the temperature of the atmosphere at zero. Under these conditions heat is constantly being given off to the air, and, if left to itself, after a time the fire goes out, the water gradually cools off, until it freezes. This tendency is caused by what is known as *radiation of heat*, and the result is that the locomotive and air in time come to the same temperature. To prevent this, either wood or coal is burned in the fire box. An ox, standing in a cold barn, or out of doors, loses heat by radiation, just as the locomotive does, and if this loss was not made good in some way, it would only be a short time before the temperature of the air and the temperature of the ox would be alike. But as a matter of fact the temperature of the blood never varies much from 101° in health, and it makes no difference whether the air is at 30° below zero or at 90° above. The temperature of the body is kept up by the food consumed just as that of the locomotive is by the wood burned. Again, the fuel consumed by a locomotive while standing idle is only an amount sufficient to supply the loss of heat. This is a comparatively small amount. When the same locomotive is coupled to a train of loaded cars, and is started on an up grade, it will be found necessary to open the drafts and increase the consumption of fuel. In drawing this load, energy is required, and this is obtained from the extra fuel consumed. An ox or a horse, when drawing heavy loads, must also expend more energy than when standing in the stall, and to develop this energy requires more food; food is to the ox what fuel is to the locomotive.

There is one other object for which we feed, namely, the production of growth. Under this head comes increase of live weight, whether in growing animals or fattening ones, growth of wool, or the production of milk. If an animal weighs one hundred pounds at birth and fifteen hundred pounds when three years old, this gain of fourteen hundred pounds must come from the food and water used. If a cow yields annually six thousand pounds of milk, this also must come from the food and water consumed.

The uses of food, then, are: To produce heat; to produce force, (muscular energy); to produce new tissue, (including increase of live weight, growth of wool, or yield of milk).

Having noted the use to which food is put we may inquire whether one part of the food is better adapted to one requirement, and another part to another requirement, or whether all the digestible parts are equally effective.

1st. What part of the food produces heat. The best authorities answer this by saying that the changes which take place in all parts of the body produce heat. The contraction of a muscle, the activity of the liver, etc., all liberate heat, and hence it cannot be said that one constituent of the food more than another is the source, but that both the nitrogenous and non-nitrogenous contribute toward keeping up the temperature.

2nd. Force is produced in much the same way as heat, from all the constituents of the food.

3rd. New tissue. There has been much conflicting testimony on the formation of new tissue, the chief difficulty being to find the source of fat. At first, it was held that the animal only sorted out and stored the fat already existing as fat in the food. Experiments soon showed that the fat produced by pigs, and in the milk of cows, largely exceeded that taken into the system in the food. It was then held that the albuminoids might make up the deficiency, or by others, that the

albuminoids were the only source of fat. Laws & Gilbert showed, in certain experiments that they carried on, that not only was there a lack of fat in the food, but that the fat and albuminoids taken together could not produce all the fat that was stored up, and consequently that the starch or sugar of the food must have contributed. It may be safely said that the elements from which the animal fats are made up come from the albuminoids, carbo-hydrates and fat. It is probable that the muscle and other nitrogenous parts of the animal come from the albuminoids of the food. This, however, is not fully concurred in by all physiologists.

The changes which food undergoes in the animal system are very complex; and just how hay grain, cottonseed, grass, ensilage, etc., are changed into milk, muscle, blood, wool, fat, etc., is a problem which physiological chemistry has not yet definitely solved.

The whole object of this brief discussion of the principles of animal nutrition is to enable us to understand the meaning and use of the *stock feeding tables* which have been prepared for us, and as an intelligent use of these tables cannot fail to improve the methods of feeding too often practiced in this country. I shall try to show just what the tables are and how they are to be used.

(TO BE CONTINUED.)

Veterinary.

Contagious Diseases.

BY C. H. SWEETAPPLE, V. S.

As mentioned in my last article, the nature of the contagious principle—the microbe—of communicable diseases is a discovery almost of yesterday. The mystery that surrounded the origin and development of "the pestilence that walketh in darkness," devastating the home and the hearth, the stable, the herd and the flock, has been in a great measure dispelled. Still we have much to learn; there is much yet to be discovered.

The contagious and infectious diseases are those which have ever been most destructive and most intractable. Some of these are special to the human race, others to one or more species of animals, while some are readily transmissible from species to species. Many of those diseases affecting the lower animals can be conveyed to man. Of rabies, glanders and anthrax, many sad and fatal cases are recorded, and the transmissibility of tuberculosis from the lower animals to man, and from man to the lower animals, can no longer be disputed.

Canada fortunately has been, and still continues, singularly exempt from the fatal contagious diseases that have, at different times, prevailed to a greater or less extent over almost all other parts of the world. We certainly occasionally find a local outbreak of glanders in the horse, but as the law now exists in the Province of Ontario, the disease is readily suppressed as soon as it is recognized, and never assumes alarming proportions.

With regard to anthrax, that most fatal and widespread of all the diseases of the lower animals, it is safe to say that throughout the length and breadth of our fair Dominion the disease has never existed so as to cause serious alarm. There certainly has been an outbreak or two reported in the North-west, and I believe in the east, in the Maritime Provinces, but they were merely of a local character. In Ontario we occasionally find diseases of an anthracoid nature, such as braxy in sheep, and quarter-ill or black quarter in young cattle, but they have not caused general alarm, as they do not appear to be readily transmissible, not having spread be-

yond the immediate locality in which they have originated.

The pure anthrax, or "splenic fever," now known to be produced by the "anthracis bacillus," prevails in one or more of its diversified forms over most parts of the world, and is one of the most fatal of all the scourges to which the domestic animals are liable. The carefully tended stock of the most highly civilized countries suffer equally with the semi-wild flocks and herds of the Asiatic plains. It has decimated the herds of reindeer in the polar regions, and caused widespread consternation and disaster in temperate latitudes and in the tropics. The Finn., the Lapp, the South African, the Mexican and the Australian colonist have alike had reason to dread its ravages; in fact there is no country on the face of the globe in which the disease has not appeared. It is believed to be the scourge with which the Egyptians were punished when there was "a breaking forth of blains upon man and upon beast throughout all the land of Egypt; upon the horses, upon the asses, upon the camels, upon the oxen and upon the sheep." Virgil, in his beautiful pastoral, the "Georgics," has described its contagious nature and fatal character with remarkable accuracy, pointing out the dangers of infected fleeces of sheep to mankind so clearly that it is quite evident that he was describing what is now known as "wool-sorters' disease," or "malignant pustule." It frequently occurs in the histories of the early and middle ages as a devastating disease among animals, and also as a plague in mankind. Countries with extensive marshes or a tenacious subsoil, are those most frequently and most seriously visited by it. In fact the losses incurred by the world at large in all classes of stock from anthrax are appalling. Some idea of their extent may be obtained from the fact that in the district of Beauce alone, in France, the annual loss in sheep was estimated at about one hundred and eighty thousand head; this was before the introduction of Pasteur's celebrated discovery of the inoculation of those animals with "attenuated virus" for its suppression.

In India it is witnessed in all classes of animals, and is well known there as a fatal scourge among cavalry horses, and is called the Loodiana disease. In South Africa it is also most destructive to horses, and in the form it appears there it is called "South African horse sickness," and appears to more especially prevail in low lying, damp localities at certain seasons of the year.

With the exception of the few slight outbreaks of anthrax that have been reported, and considering the prevalence of the disease in one or more of its numerous and diverse forms at different times in almost all other parts of the world, Canada may certainly be said to possess a singular immunity from its ravages.

Contagious diseases present a wide scope for consideration. It may therefore be well to again recur to this subject. With regard to tuberculosis in cattle—the disease that is just now claiming special attention, both in Great Britain and on this side of the Atlantic—cases of it may undoubtedly be found in Canada, perhaps more especially in some particular families of pure bred cattle; but that it exists to any alarming extent, or to an extent to call for any special legislative measures to be introduced for its suppression, judging from my own experience with the disease, I do not believe. On this subject I am now endeavoring to obtain some reliable statistical information, and will give the results of my enquiries in a future number of the ADVOCATE.

The Dairy.

Winter Butter-making.

BY DAIRYMAN

NO. II.

In my last paper, I gave ten short rules to be observed by butter-makers; and promised to give reasons for their being observed, and the consequences that will follow if neglected. I begin with the cow as the producer of the raw material. First—The cow must be healthy, supplied with plenty of good food, salt and water; but she must be kept comfortable, which means more than meat and drink. She must have a warm place to live in, clean, and well ventilated. If the stable is not kept clean, the manure in giving off ammonia and other foul odors, pollutes the air the cow is compelled to breathe, and by breathing foul air the whole system becomes foul and unclean, and consequently her milk is tainted in her system, in the following manner: The air is inhaled into the lungs and comes in contact with the blood, through the air cells in the lungs; and when the air is pure, the blood is purified by absorbing the oxygen therefrom, and giving off the impure carbonic acid gas, which the lungs throw off when the air is exhaled. It can be easily understood from this, if the cow is compelled to breathe impure air, her blood is not purified, but the reverse; instead of being purified, it becomes polluted and tainted with the foul air she is compelled to breathe, and the result is tainted milk, from which no expert can make fine butter; no matter how the milk and cream is handled, it is unclean in its very nature and will remain so. Hence the necessity of clean, well ventilated stables for cows. The same results follow from the cow drinking impure water. She will do all she can to rid herself of the foulness, by throwing it out of her system as quickly as she can; but when she has got about clear of the foulness by the labor of her lungs, kidneys, skin, and droppings, she gets another dose, and in spite of herself her produce is spoiled, and the butter comes to market poor in quality. Often the dairywoman has done the best she knew how, and does not know how her butter is not fine. A dirty, ill-ventilated stable, may have caused it all.

My first rule was setting the milk warm to get the best result in raising the cream; the article in your January issue, by Prof. Henry, answers this more fully than I could, and agrees with my own experience; the testimony of two witnesses should be satisfactory. Second—If cream stands too long it will get old tasted, and lose its pure natural flavor. Third—If gathered too long it gets bitter. Fourth—If cream is not properly ripened it does not yield the same quantity of butter, and will be weak in body and texture, and it takes longer labor to churn, other things being equal. There has been a good deal of discussion of late, as to the best condition of cream when ready to churn; some advocate sweet, some sour. In order to prove this question for myself, I have made butter from the morning's milk, within four hours of the time it was milked from the cow, and on every occasion I had less butter and of poorer quality. The butter was perfectly sweet and pure, but weak both in body and flavor, just because of not being ripened to develop the quality and flavor. The proper time to churn cream is when it has become nicely thickened, slightly acid,

and like thin jelly, with the flavor fairly well developed. A little attention and watchfulness, as to the temperature and state of the cream, will give any one the desired knowledge. Fifth—If the cream is too warm it breaks the grain of the butter in the churn, and makes greasy butter; if too cold, it takes too long to churn, and the butter does not come, nor gather so well, and the quantity is less. Sixth—White butter may be as good, but it is not so saleable, being worth less by five or six cents per lb., in fact white butters without any ceremony are put out as culls. Butter of a good, bright, solid yellow color is as easily made as white, by using annatto diluted in warm water. Don't use too much at first, and gradually find out just what pleases the customers, and give it to them every time alike. Seventh—If butter gets too much working, it spoils the grain and texture, and makes it pasty and greasy, with no solid body. The other two points may be passed over as far as winter butter is concerned, as it is not necessary to put it into winter tubs. In your January issue, you give the experiments by Prof. Robertson, *re* salting butter, which is very instructive, as they were actual tests in quantity, and after being kept six months, should be conclusive, so far as the salt question goes.

If our dairy butter this winter is not some improvement on the past, especially by the readers of the ADVOCATE, there is a great deal of labor lost, and I am sure it is not the ADVOCATE'S fault. I would suggest that every butter-maker who derives any benefit from your paper, should in gratitude recommend it to their neighbors, as worthy of their support. Your articles on cows, feeding, and dairying, are worth more than the cost of the paper.

Dairy Notes.

Washy food makes washy milk.

There is a big difference between a cold and a warm stable.

Don't waste the summer's profits by careless waste in winter's feeding.

An important part of the dairyman's capital is gentleness, comfort and regularity.

To draw a circle—keep stock to make manure, save manure to feed crops, preserve crops to feed stock.

Rye may be mixed with oats or bran, at the rate of one-third rye, and then it is good for horses, cows or hogs.

The future dairyman must know his business. Slushy foods will not make cheese nor butter. They will do for the milkman better.

Cold draughts are the seeds of disease and loss. Remedy, hemlock boards. They may be old ones. An application of shingles to the parts will do.

Every farmer should take at least one agricultural publication. Nothing quickens a boy's ideas of or inspires him with a love for farming so much.—Prof. Robertson.

Churning must now be done at a higher temperature—sixty-four to sixty-six degrees. The room must also be warm or the cream will swell and get frothy and the butter will not come.

Scalding milk is making it too hot. Butter made in this way will be white, soft and lacking in flavor. Warm the milk not much above blood heat and then set it away for the cream to rise.

The man with brains don't stumble through life; he thinks, and knows just what he is going to do. His animals are kept for a purpose and they are suited to it. In this way he gets a profit.

The Northwestern Agriculturist says: The "boiled down" opinions of those who have had experience indicate that it does not pay to warm water for stock when they drink under shelter and the water is free from ice.

As the
wide-av
profitab
give in
perimen
grains

At t
mental
varieti
Japan,
Weloo
about
lbs. pe
41½ bu
1618
weighi
Hende
weighi
Weloo
dently
weighi
data
color
plant
the M
bistier
per bu
47 bu
1598
weigh
Surpr
per b
Clyde
bushe
bushe
total,
weigh
Austra
bushe
bushe
1414.
but w
Cent
next.
At
ment

King
Ame
Earl
McL
Hen
Dom
Day
Lax
Bliss
Bliss
Dwa
Cart
Fill-
Kent
Lax
McL
Bro
Cart
Prin
Tele
Lax
Dwa
Cha
Blac
Lars
Tele
Blis
Fort
Vet
Lax
Blis
Bish
Pre

The Farm.

Grains.

As the time for seeding approaches, and the wide-awake farmer is looking about for the most profitable varieties of grain of various kinds, we give in condensed form the results of a few experiments with some of the varieties of spring grains that have been made during the past year.

OATS.

At the Pennsylvania State College Experimental Station, in the spring of 1888, six varieties of oats were tested, viz., White Victoria, Japan, Wide Awake, Henderson's Clydesdale, Welcome and Harris. White Victoria gave about 37 bushels 3 pecks per acre, weighing 37 lbs. per bushel; total, 1396½ lbs. Japan gave 41½ bushels, weighing 39 lbs. per bushel; total, 1618 lbs. Wide Awake gave 43½ bushels, weighing 36 lbs. per bushel; total, 1608 lbs. Henderson's Clydesdale gave 35½ bushels, weighing 39 lbs. per bushel; total, 1388½ lbs. Welcome was weak in the straw, and was evidently a failure as no data was given. Harris weighed 28½ lbs. per bushel, and that is all the data given with it, save that it is inferior in color and lustre, and not of a character to supplant the varieties now in use in that State. At the Main State Agricultural College White Probstier yielded 62 bushels, weighing only 24 lbs. per bushel; in all 1688 lbs. Clydesdale gave 47 bushels, weighing 34 lbs. per bushel; total, 1598 lbs. Russian White gave 54½ bushels, weighing 28 lbs. per bushel; total, 1530½ lbs. Surprise gave 56.6 bushels, weighing 24½ lbs. per bushel; total, 1386.7 lbs. Henderson's Clydesdale, 46 bushels, weighing 33 lbs. per bushel; total, 1518 lbs. White Belgian, 45.6 bushels per acre, weighing 31½ lbs. per bushel; total, 1436.4 lbs. Black Tartarian, 50.3 bushels, weighing 26 lbs. per bushel; total, 1307.8. White Australian, 54.6 bushels, weighing 26 lbs. per bushel; total, 1419.6 lbs. White Victoria, 46.6 bushels per acre, 32½ lbs. per bushel; total, 1414.5 lbs. Several other varieties were tested, but we have given those with best results. White Centennial giving the smallest yield and Harris next.

At the New York Station a series of experiments were made with fertilizers on the oat crop

of 1888, and from the results obtained animal manure is the cheapest fertilizer by considerable odds. From \$8.40 worth of sulphate of ammonia and dissolved bone black, the net gain of grain on the plot was only three-quarters of a pound over five loads of barnyard manure; the straw weighed ten pounds more, so that for immediate results the barnyard manure is practically as beneficial for the first crop, and as the bone black was dissolved and sulphate of ammonia very soluble, following crops would be much better where the farmyard manure was used, even though it had been fermented and applied in the most soluble stage. Experiments were made with other fertilizers, but the results were considerable below those given. The greatest care seems to have been taken to arrive at accurate and intelligent conclusions.

BARLEY.

During the same season, at the Maine Station, experiments were made with barley with the following results:—Nepaul or Hulless, 48 bushels per acre, weighing 49 lbs. per bushel; total, 2352 lbs. Purple Hulless gave 39.6 bushels per acre, weighing 53 lbs. per bushel; total, 2098.8 lbs. Both were ripe and cut on August first, being the first to ripen, and giving the largest yield of the seven varieties tested, except the Champion Two-rowed, which gave 55.6 bushels per acre, and weighed 43 lbs. per bushel. Imperial gave 30.6 bushels, weighing only 38 lbs. per bushel; total, 1162.8 lbs. Of the other three varieties tested—Menshury, Chevalier and Melon—none gave above 26 bushels per acre, or weighed above 37 lbs. per bushel, and Chevalier only gave 13 bushels per acre.

At the Pennsylvania Station, however, Menshury sown one week later than Nepaul or Hulless gave one-third more bushels per acre, and weighed 51½ lbs. per bushel; White Nepaul weighed only 52 lbs.

PEAS.

We append a selection from a lengthy table of experiments. The yield was from a row forty feet long, and the width between the rows was three and a-half feet, or in all one hundred and forty square feet of land, thus the yield per acre in pounds will be the product in the right hand column multiplied by 239½, or 240 is near enough for all practical purposes. We have selected only those that have some special merit, either for early maturity or productiveness. This table is also from the report of the Maine State College Experiment Station.

PEAS. Name of Variety.	Fit for Use.	Vines Ripe.	Yield of Dry Peas.	DESCRIPTION.
King of the Dwarfs.....	July 11	Aug. 1	4-5	Medium, green, wrinkled.
American Wonder.....	" 8	" 1	3-15	Medium, green, wrinkled.
Earliest of All.....	" 7	" 1	4-13	Small, green, nearly smooth.
McLean's Little Gem.....	" 11	" 8	4-12	Medium, green, wrinkled.
Henderson's First of All.....	" 8	" 1	4-4	Small white, smooth.
Dominion.....	" 18	" 16	5-11	Large, green, nearly smooth.
Day's Early Sunrise.....	" 20	" 16	6-2	Large, white, wrinkled.
Laxton's Prolific Long Pod.....	" 20	" 16	6-2	Large, green, wrinkled.
Bliss' Abundance.....	" 19	" 16	5-0	Large, green, wrinkled.
Bliss' Ever-Bearing.....	" 21	" 19	4-12	Large, green, wrinkled.
Dwarf Champion.....	" 23	" 19	5-2	Large, green, wrinkled.
Carter's Pride of the Market.....	" 22	" 20	4-5	Large, green, some wrinkled.
Fill-Basket.....	" 21	" 16	7-1	Medium, green, somewhat wrinkled.
Kentish Invicta.....	" 8	" 1	3-4	Small, green, nearly smooth.
Laxton's Alpha.....	" 11	" 8	2-4	Small, green, wrinkled.
McLean's Advancer.....	" 13	" 8	3-10	Medium, green, wrinkled.
Brown's Dwarf Marrowfat.....	" 20	" 20	5	Medium, white, smooth.
Carter's Stratagem.....	" 22	" 20	4-11	Large, green, wrinkled.
Prince of Wales.....	" 21	" 19	4-15	Large, white, wrinkled.
Telegraph.....	" 20	" 16	5-0	Large, green, somewhat wrinkled.
Laxton's Superlative.....	" 22	" 16	6-12	Medium, green, somewhat wrinkled.
Dwarf Sugar.....	" 18	" 8	4-8	Very small, white, smooth.
Champion of England.....	" 26	" 19	5-0	Large, green, wrinkled.
Black-Eyed Marrowfat.....	" 26	" 20	7-15	Large, white, smooth.
Large White Marrowfat.....	" 26	" 29	7-6	Large, white, smooth.
Telephone.....	" 20	" 25	4-15	Large, green, wrinkled.
Blue Imperial.....	" 25	" 29	7-1	Large, green, slightly wrinkled.
Forty-Fold.....	" 20	" 29	5-9	Large, green, wrinkled.
Vetche's Perfection.....	" 23	" 29	5-2	Large, green, wrinkled.
Laxton's Marvel.....	" 23	" 29	5-9	Large, white, wrinkled.
Bishop's Dwarf.....	" 23	" 20	7-5	Small, white, smooth.
Bishop's Long-Pod.....	" 22	" 20	7-0	Large, white, smooth.
French Canner.....	" 20	" 16	7-10	Small, white, smooth.

Spring Wheat and Oats.

From all that we can learn, the White Russian (also called Lost Nation,) Fyfe, Colorado, and Goose Wheats have all yielded well in certain sections—one doing best in one locality, and one in another. The wise course is to sow the bulk of our crops of those varieties that have proved successful in our respective neighborhoods, and to test in a small way the best of the promising new kinds. It must never be taken for granted that because a variety does very well in one vicinity it will do equally well everywhere.

Below will be found letters from some of our leading seedsmen:—

Mr. George Keith, 124 King St. East, Toronto, writes us: "That throughout the County of York, spring wheat has yielded well. White Russian and Fyfe are the kinds that have done the best. The Black Tartarian Oats have the best reputation for yielding, and were a very fine crops last year."

J. A. Simmers, 147 King Street East, Toronto, writes principally of new varieties as follows:

"Mars' Spring Wheat.—Although this variety cannot be exactly termed new (having been before the public on a limited scale for three seasons,) growers claim for it such a well deserved reputation, that mention of its particular and special features will be interesting to all desirous of a reliable change of seed for the coming seed time. The head is bald and full sized, containing small, very plump grains; of a reddish texture (like the famous Scotch Fyfe); straw of a nice bright color, and stands up well. Average yield last season was thirty bushels per acre, and all reports received from farmers who grew seed for us, state they are quite satisfied with it. For milling this wheat has few equals and none better.

"Canadian Triumph' Oats.—This variety is of extraordinary weight, earliness, and productiveness; the straw is so strong and firm that it holds up well the tall luxurious heads, filled with heavy plump grains, the natural weight of which is 51 lbs. to the bushel. The yield per acre is acknowledged to be something wonderful—eclipsing any other white oat so far offered. On ordinary soil (not heavily manured) 90 bushels of cleaned oats was the product of one acre: The grain is of a beautiful white color, plump, and of medium size, with tolerably heavy hull; straw stands up well, and is nice and firm to handle.

"New Japanese' Buckwheat.—So called because the seed originally came from Japan, and in the following quite, modest way: In 1888, a gentleman travelling in Japan, sent to a friend in New Jersey, about a thimbleful of this new variety; it was carefully planted, and enough seed raised to sow half a bushel in 1886, from which the crop was forty bushels. A few bushels of this was given out for trial among neighboring farmers, who were delighted with the enormous yields it produced. The kernels are twice the size of any other buckwheat, of a rich, dark-brown color, and produces a superior flour. Owing to its branching habit, only one-half as much seed is required per acre, while the straw is much stiffer, and stands up better. We fully believe this new variety must, in time, displace all others."

John S. Pearce, London's well-known seedsmen, writes us thus: "The Colorado is a comparatively new wheat, offered for the first time this season by us. The introducers say it is a light amber wheat, rather short, thick berry; the heads are a good deal like the Champlain,

but a little thicker set; straw and chaff white; stands up well, and ripens very early. The last time we grew the Champlain in same field with the Colorado. the latter was cut and in the barn before the Champlain was cut. We should think it would do well where any variety of Spring Wheat will grow.

"Green Mountain.—This wheat originated in Vermont, and has done well the past season; it is a heavy cropper; a bald, light chaff wheat; berry medium size, of a light amber color, and an excellent milling variety.

"Champlain.—Introduced by us three years ago, is considered by all to be a sure variety to grow, and has yielded 30 to 35 bushels per acre where some of the older sorts did not yield half that quantity. It is a bearded white chaff wheat; straw long and clean; heads long, and filled with a plump berry, of a dark amber color, and as a milling variety it is unsurpassed.

"From personal trials and testimonials received, we have no hesitation in saying that the New Japanese Buckwheat is the earliest and largest yielding variety of Buckwheat in cultivation. The kernels are at least twice the size of those of any other variety; their color is a rich dark shade of brown; the straw is heavier, it branches more, and does not require as much seed as other kinds. It is enormously productive, and produces a flour of superior quality. From one stalk we counted 1105 kernels.

"The Egyptian Mummy Pea.—We have found these peas are fast becoming a favorite with growers, and it is only a question of time when the Mummy Pea will be as largely grown as the Golden Vine. It ripens about the same time as the Marrowfat, bearing its pods on the top of the stalk, and will yield one-half more peas to the acre than any other field variety.

"The Centennial is a very fine, large, white pea; well worthy of a trial."

Mr. John Adams, Port Perry, the well known stock-breeder and farmer writes: "For the past two seasons I have sown the Colorado wheat, it has a light colored shapely berry, and is a good yielder, generally free from rust. In 1887 it turned out 26 bushels per acre, and in 1888 it yielded fully 30 bushels per acre, it is slightly bearded, a strong, vigorous grower, and ripens earlier than any other sort I know of, and is what is known to the millers as a hard variety. White Russian is almost exclusively grown in this neighborhood. In oats, I find that the earliest ripening sorts are always the best yielders. I find White Canada a fine, early variety. They ripen a week earlier than any other kind in this section, I thrashed 850 bushels from 10 acres. The straw is of medium length, the berry is inclosed in a thin hull. In peas, I find the Prince Albert, for all purposes, one of the best kinds I know of, they yield well on almost any variety of soil. When the soil is heavy and in good order, the Marrowfat answers well."

We have seen several fields of White Canada Oats, and we think very much of them. On our test ground last year, we found this oat and Vick's American Banner by far the best tested, they were much alike in yield and quality—we have found them less inclined to rust than many of the others.

The object in cultivating the soil is to raise from it a crop of plants. In order to cultivate with economy we must raise the largest possible quantity with the least expense, and without permanent injury to the soil.

Farming Affairs in Great Britain.

(From our English Agricultural Correspondent.)
London, Feb. 6.

A TOUCH OF REAL WINTER.

Within the last few days we have had a touch of real wintery weather, after a long mild period. Heavy snow storms are reported from various parts of the United Kingdom, and frosts have been common, though not very severe at night. As there were fear of the wheat and other crops getting too forward, this check to vegetation is salutary. For fruit it was even more necessary than for farm crops, for the pear trees were breaking out into bud, and much forwardness is very dangerous.

THE LAMBING SEASON.

Lambing is now becoming general in all the flock districts of England, which is about half over in the south. The reports hitherto are highly satisfactory, and the general impression is, that we shall breed a fine crop of sturdy lambs this year. We need a good increase, as the number of sheep in the Kingdom fell off last year. Sheep-breeding is one of the most profitable branches of agriculture here, one year with another. Previous to last year, the industry had been in the shade for a short time, lambs having sold badly; but in 1888 there was quite a change, and breeders made a good thing of it. As the prospects for feed are extraordinarily good, there being a splendid plant of clover in all parts of the country, while other feeding crops are promising, there is every reason to expect that lambs will sell well again this year.

BEAN AND PEA BEETLES.

Among the worst enemies of the future crops are the beetles which deposit their eggs in the blossoms, the result being the production of the maggots which make the holes so frequently seen in beans and peas. At this time of the year the maggots have changed into pupæ, and if seed containing them be sown, the beetles will come forth to do their mischievous work in the next crop. An experiment has just been made with beans infested with this pest. They were washed for an hour in a mixture of one part of paraffine to ten parts of water, and not one of the pupæ was found alive in beans cut open afterwards. The plan adopted by the experimentalist was as follows:—Two paraffine barrels, which are not difficult to procure, must be fitted with a large wooden tap each—these can be had for about twenty-five cents each—and set upon a stand. One of them must have one gallon of paraffine and ten of water poured into it, and the seed beans put in to soak for an hour. Then the liquor is to be drawn off into the other barrel, and the process repeated until all the seed has been treated. Carried out in this way the quantity of paraffine required for a hundred bushels of beans is small. Peas, of course, can be treated in the same manner.

PLEURO-PNEUMONIA

It is grievous to learn that several fresh outbreaks of this disease have occurred in various parts of England. Our local authorities, under direction of the Veterinary Department of the Privy Council, are supposed to be stamping out the disease; but they are so averse to going to the necessary expense, that they only scratch the enemy they ought to kill. This is very absurd, as but little thought is required to convince any rational man, that in the case of eradicating a highly infective disease, the first cost, however heavy, is usually the lightest. But until the

business is taken out of the hands of local authorities, and the expense of it is made a national instead of a local charge, we shall never free the country of pleuro-pneumonia.

DAIRY SCHOOLS.

The great value of the dairy schools generally opening up in various parts of the United Kingdom, is now pretty generally recognized; but it is not often that as striking a tribute to their value is offered as that which has taken the form of a contribution of £25 from the Trustees of Cork Butter Market to the Munster Dairy School. The money was voted last week in recognition of the improvement in the butter sent to Cork market from several districts in the south of Ireland, owing to the excellent instruction given at the Munster school. The dairy school in Cheshire also have been the means of improving the cheese-making in many a farm house. On Tuesday a party of journalists paid a visit to the Dairy Institute established in the Vale of Aylesbury, by the British Dairy Farmers' Association, and were much gratified at the progress made by the undertaking in a very short time. Two dairy schools are doing good work in Suffolk; the Bath and West of England Agricultural Society has a migrating school of the same kind, which visits one town after another in the western counties, and there are several more schools in different parts of England and Scotland, while three are projected for North Wales. Before long we shall have a dairy school in nearly every county, and the rising generations of butter and cheese-makers will have opportunities which their predecessors did not enjoy. Then, with schools and dairy factories multiplying in the country, there is reason to expect a vast improvement in dairy products. The movement has not commenced a day too soon, as our dairy imports have been increasing, and the demand for Danish and Normandy butter, uniform in quality according to brand, though not equal to our best, has become a sore point with home producers.

THE RYE GRASS CONTROVERSY.

Sir J. B. Lawes has added his valuable testimony on the side of those who advocate the inclusion of rye grass in mixtures of seed for permanent pastures—that is to say, on the side of almost all practical farmers and experimentalists. He says he can quite understand the objection to farmers paying high prices for mixtures containing this cheap grass; but that has nothing to do with the advisability of sowing the variety, as farmers make their own mixtures. Sir John has, no doubt, as to the high-feeding value of rye grass, impugned by Mr. Carruthers, Consulting Botanist to the Royal Agricultural Society, who can scarcely be regarded as an authority in respect to feeding value, that being in the chemist's department. Sir John Lawes has found rye grass preponderating in a Leicestershire pasture, which fattens bullocks at the rate of more than one head per acre per annum, as well as in many other good pastures. In one of his own pastures, laid down twenty-five years ago, and usually fed by cattle, but mown two or three times, he has found that rye grass is still most prominent in the farinaceous herbage.

BIMETALLISM AND PROTECTION.

At a meeting of the Central and Associated Chamber of Agriculture, a report in favor of bimetallism and a resolution advocating duties on foreign farm produce and manufactures, were both carried by considerable majorities. Neither object has much chance of success, nd

the prote
doubt the
ulated by
contempo
old purch
wheat gro
lower the
is only a
upon a q
terests al
fited or
say, but
vocate a

Mr. J.
Howard,
implem
suddenl
was a ver
cultural

On pag
quiry, b
Wheat.

where th
named w
with reg

It is a
strong, c
thirty-f
yielded i

over. I
and a-ha
Midge d
grows a

the same
sample i

It will
will thro

for some
be sown
better th

better th
where w

sells in T
than fall
per bush

I woul
next spr
it does n

With
and low,

an idea
not grow

the head
would de

land sim
rich, I w

acre, an
ghird lea

the acre,
bright.

A person
There ar
bushels

and sow
it makes

Take
pay you
and it s

A peti
farmers
sity of g

In view
this is c
brain de

the protectionist proposal has none at all. No doubt the export of Indian wheat has been stimulated by the fall in its gold value of the rupee, contemporaneously with the maintenance of its old purchasing power for all that the Indian wheat grower has to pay for, and the effect is to lower the price in European markets; but this is only a side issue, and will not govern a decision upon a question which concerns the national interests all round. Whether they could be benefited or not by bimetalism I do not pretend to say, but the onus of proof rests on those who advocate a resolution in one currency.

DEATH OF MR. JAMES HOWARD.

Mr. James Howard, of the firm of J. & F. Howard, of Bedford, whose plows and other implements are known all over the world, died suddenly of apoplexy last week. Mr. Howard was a very active and able man in all public agricultural affairs, and his loss is a serious one.

Wild Goose Wheat.

BY R. T. WOOD.

On page 49, February number, there is an inquiry, by H. B., with regard to Wild Goose Wheat. Living in the Township of Etobicoke, where there is a large quantity of the above named wheat grown, I will tell H. B. something with regard to it:—

It is a spring wheat, and does best on a good, strong, clay loam; yields from twenty-five to thirty-five bushels to the acre—sometimes it has yielded in the neighborhood of forty bushels and over. It requires to be sown thick, about two and a-half to three bushels of seed to the acre. Midge does not affect it to any great extent. It grows a large quantity of straw and ripens about the same time as late oats, but will be a better sample if let stand until dead ripe before cutting. It will not shell out when dead ripe, and will thrash better if it stands out in the shock for sometime after being cut. It will require to be sown early in the spring. It will stand wet better than any other kind of wheat, in fact, better than oats, but will not do well on a field where water is lying in the furrows. It generally sells in Toronto market about 20c. less per bushel than fall wheat. At present writing it is 84c. per bushel.

I would advise H. B. to try a small quantity next spring first, as I understand in some parts it does not do well.

With regard to sowing it on a field that is wet and low, as the enquirer wishes to know, I have an idea it would do very well, providing it did not grow too much straw and lay down before the heads got properly filled. The way that I would do if I intended to sow Goose wheat on land similar to what H. B. mentions, if it is very rich, I would sow about two bushels of seed per acre, and when the wheat got into the second or third leaf I would sow about a barrel of salt to the acre, which will make the straw strong and bright. Salt is much used on this grain here. A person can tell where salt has been sown. There are quite a number who mix about two bushels of oats and one of Goose wheat together, and sow it. When it is thrashed and ground up it makes the best meal for horses that can be got.

Take time to read and study more and it will pay you. The best tool a farmer has is his brain, and it should be kept bright.

A petition to the U. S. Senate from Vermont farmers sets forth among other things the necessity of greater protection against Canadian barley. In view of the similarity of soil, appliances, etc., this is certainly paying compliment to Canadian brain development.

Ensilage and Fodder Corn.

BY PROF. JAS. W. ROBERTSON, ONTARIO AGRICULTURAL COLLEGE, GUELPH.

ARTICLE II.

GROWTH OF THE CROP.

Last spring, part of a field at the Ontario Experimental Farm was turned over to my care for the purpose of putting into practice, and to the proof, the newer theories of thin seeding and frequent cultivation in the growth of a crop of fodder corn for the silo. The soil, in parts of the field, is a loose clay loam; in places, a poverty stricken clay crops out. It had not been manured (so I learned) for four years, and had been cropped every year. It was rather foul with thistles and other weeds. An endeavor was made to clean the field while cultivating to produce a good crop. On 21st May, Mammoth Southern Sweet Corn was planted by the use of a common force-feed seed drill—all the spouts except two were stopped up; these were three feet six inches apart. About one-third of a seven and three-quarter acre plot was planted at the rate of 337 grains per 100 feet; as much more was planted at the rate of 226 grains per 100 feet, and an equal area at 172 grains per 100 feet of lineal measure in each row. In other words, the rows over the whole field were three and a-half feet apart. One part of the field had the seeds in each row about three and a-half inches apart; in another part, they were four and a-half inches distant from each other, and in a third part, seven inches was the space between the several grains. The thinnest seeding gave by far the largest crop—the difference being as between nearly twenty-four tons per acre of green fodder from the thinnest seeding, against an average of sixteen and three-quarter tons for the whole field. But I must not anticipate. The seeds were put in at an average depth of two and three-quarter inches. Had the crop been put in two weeks earlier, which would have given a decidedly larger crop, the grains would have been planted at a less depth. When corn is planted very early, while the soil is yet cold, a shallow thin covering of soil is best. When planted as late as June, it should be put into a depth of at least three inches.

When the plants were from two to three inches high, light harrows were dragged diagonally across the rows. A second harrowing was given a week later. That treatment was decidedly beneficial. Tribulation in early life gives strength at maturity. Very few plants were injured, the smaller weeds were killed and the corn growth was invigorated; the rows ran north and south. Afterwards, a one-horse scuffler was used between them until the plants were over five feet high. Shallow cultivation gives the best results. The loosened soil absorbs moisture from the atmosphere, and also arrests the escape of moisture from the soil by its looseness, hindering the capillary movement of the water from below. The field was hoed over twice to kill the thistles and weeds, which the scuffler had missed. One half the cost was charged against the corn crop, the other half is rightly chargeable to improvement of the field.

On August 27th, a number of average stalks from the corn in rows were weighed and compared with a number from a field of the same kind of corn sown broadcast, three bushels to the acre. The stalks from the former weighed twenty-seven ounces each, while the stalks from the broadcast field weighed four and seven-tenth

ounces each. Analyses as to the per cent. of water were made by Mr. C. A. Zavitz. The following shows the result:—

	Per cent. of Water in Stalks.	Per cent. of Water in Leaves.
Corn in rows...	85.26	76.73
Broadcast corn...	88.69	78.51

The cost of producing the crop is shown in the following statement. The allowances for the plowing and cultivation and rent are estimated, the other items are at cost:—

Plowing and cultivating.....	\$2.50 per acre
Harrowing.....	.50 "
Seeding.....	.50 "
Seed (less than 1/2 bur. per acre).....	.50 "
Harrowing after the corn was up.....	.50 "
Hoing.....	.75 "
Cultivating five times.....	8.50 "
Cutting and laying in armfuls.....	1.25 "
Use of land, rent allowance.....	4.50 "
Total cost for labor, seed and use of land.....	\$14.40

The crop averaged 16.73 tons to the acre of green fodder. After being wilted for one day, it lost one-seventh by weight. The weight of wilted fodder was 14.34 tons per acre. As specified above, the cost for the fodder lying in the field wilted and ready to be put in the silo was \$14.40 for 14.34 tons, or as nearly as may be, \$1 per ton. Not more than every second stalk had an ear with the grain in the milky stage. Earlier planting and richer soil will remedy that defect another year. Too much emphasis can hardly be laid upon the advantages from early planting. Of course, the land must be in proper tilth and condition as to moisture and cultivation. Underdraining will show its value, with particular clearness, in the growth of corn fodder. Maturity of each plant is requisite to gain the full possible feeding value. Warm, drained land will give such increased growth, before and during June, that dry weather in July and August will only hasten it. Corn needs abundance of light, and the free circulation of atmospheric air. Therefore, the rows should not be closer than three feet, and the seeds at least six inches apart. At Cornell Experimental Station tests were made as to the comparative values of the crop when grown in four different ways—taking timothy hay, at \$12 per ton, as the measuring rule. Corn grown in hills three feet apart had a feeding value of \$30 per acre; in rows, \$35.74; broadcast, \$15.23; broadcast and harrowed after it was up, \$21.64.

Another test was made (for particulars of which I am indebted to my esteemed friend, Professor Roberts, Director of the Cornell Experimental Station): A plot was sown in rows at the rate of six quarts of corn to the acre, using the same measure for valuation as formerly. It was found that on July 24, the feeding value of the corn was \$14 per acre; August 8th, \$26 per acre; September 3rd, \$47.35 per acre. These figures confirm our Canadian experience.

The growth of broadcast corn should not be continued; it is impossible for the stalks thus grown to mature. Only when the plant has a chance to carry seed, whereby to produce itself, do its leaves and roots greedily reach out and appropriate the elements of nutrition. Broadcast corn is mainly water and greenness without nourishing power. The animal filled with it has only been fooled with swallowing what will yield but very imperfect support. In the case of milking cows, the milk from broadcast corn and pasture is deficient in fat. The corn should be left growing until each stalk has a well developed ear. When the grain is in the milk, the whole plant is in its most easily digestible state. When the lower leaves turn yellow, and the ears begin to feel firm, the corn should be cut. It is not prudent to risk the occurrence of frost; but our limited experience indicates that corn slightly frozen comes out of the silo with as much feeding value per ton as fodder not touched thereby.

Garden and Orchard.

Ornamental Tree Planting.

There are many reasons why every farm should have a goodly number of ornamental trees growing upon it. We will mention but a few. First and chief, it pays directly in dollars and cents; this is the most powerful incentive to action. Plant a good belt of evergreens on the north and west side of the buildings, and their cost and care will be repaid in a very few years—a great many hundred per cent. in saving feed, besides the comfort to the cattle and other stock, which can not be counted in dollars and cents. It also makes the farm more valuable. There is no way in which the same amount of expenditure will add so much to the value of the farm as in tree planting; it also makes the home more attractive. And just here is the great secret of keeping the young men on the farm. If the home is attractive, the farm work prosecuted intelligently, and the early education of the boys of such a nature as to inspire them with respect for their calling, there is much less danger of them becoming enamoured of city life.

For a windbreak, there is nothing to equal the Norway Spruce (*Abies excelsa*.) Our illustration represents this beautiful evergreen as grown singly on the lawn, and while it is naturally of a beautiful form, it may be trimmed in any shape to please the fancy. We have seen them trained pyramidal, conical, hexagonal, and in one instance perfectly circular, with a square or flat top. It is worthy of all that has been said in its favor. Another beautiful evergreen is the Austrian Pine (*Pinus austriaca*.) It is a rapid, thrifty grower and makes a beautiful lawn tree, as well as an effective windbreak, but scarcely equal to the Norway Spruce. Neither of these varieties require to be trimmed up, in the general acceptance of the term, but they should be shortened in, if any of the limbs make an irregular growth; but this is not often the case. Of course, if (as is sometimes the case) the lower limbs lie on the ground, and the foliage decays, it may be advisable to remove them; but their superiority as a windbreak is largely due to the limbs growing so close to the ground that there is no current of air under them; hence the necessity of using the knife with care.

There are a great many evergreens on the market, and the inexperienced buyer is very apt to be misled; this, however, is needless, as for a shelter, hedge or windbreak, there is no other variety equal to Norway Spruce, while for the lawn it is unexcelled. Next comes the Austrian Pine, which, however, is better adapted to the lawn, and, while fair for a windbreak, is not at all adapted to hedging. The Balsam is often recommended by salesmen, but is much inferior to either of the above varieties.

Among deciduous trees, there are few, if any, that equal in beauty the Cut-leaved Weeping Birch (*Pendula jaciniata*.) As the name implies, it is of pendulous or weeping habit, and has an exquisitely formed cut leaf; the bark of the body and larger limbs being silvery white. The accompanying illustration shows the form of the tree, the bough on the left and the individual leaf. These trees combine the beauties of the upright growers and weepers; they usually cost about one dollar each, and if offered for much less

there would be a doubt as to their genuineness. Neither could we be persuaded to substitute any other variety for them.

Of the Mountain Ash there are several varieties, none of which excel the common.

The Weeping Mountain Ash is an ungainly tree, unless great pains are taken in pruning; in which case they are fairly handsome, and add variety to the lawn.

Kilmarnock Weeping Willow is of a gracefully pendulous habit; and where it is desirable to grow a tree without obstructing the view, these are admirably suited to the purpose. In addition to this selection, there are many others that it may be advisable to plant in some localities, but these enumerated should certainly have the preference. If it is desirable to plant ornamental shrubs, the following will be found a good selection: Purple Fringe, Hydrangea Paniculata, Cornus Elegantisima, Weigela Roses, and Spirea Prunifolia. All those shrubs can be depended



CUT-LEAVED WEEPING BIRCH.

upon as perfectly hardy in any place up to the 43rd degree, and will furnish sufficient variety to add to the beauty of the home.

There are a great many varieties of Arbor Vitae, but the American is the only one that is sufficiently hardy for the north, and we would especially caution our readers against investing money in the dwarf and foreign varieties, such as Tom Thumb, Chinese, Golden, etc., as disappointment will invariably follow.

Firming the soil over the roots of strawberries, or any fall set plants or shrubs, by tramping it as soon as it thaws, is a good stroke of work for early spring.

"My father planted that windbreak." The voice was tremulous with gratitude and love, and there was just a promise of a tear in the eye, but a tender smile, hallowed voice and tear, and it was plain to be seen that when the thoughtful, provident father planted the windbreak around the home of his children he also planted in their hearts monuments of affection and grateful remembrance which will ever abide with them. It is within the power of nearly every farmer to insure his children the inheritance of a windbreak; we wonder more of them do not do it.

New Strawberries.

BY W. W. HILBORN, EXPERIMENTAL FARM, OTTAWA.

(Continued from September Number.)

Itasca.—Blossoms pistillate. This variety was said to out-yield either Crescent or Wilson, and to be larger in size, while with us it was smaller than those sorts and less productive. If it does no better on further trial, there will be no place in the list of valuable strawberries for it.

Ohio.—Blossoms pistillate; fruit medium in size and quality; quite productive, of the Kentucky type. Foliage sun scalds in hot weather.

Hoffman's Seedling.—Blossoms perfect; fruit medium to small; quite acid. Of little value, as there are so many better varieties.

Woodhouse.—Blossoms pistillate; fruit medium in size and time of ripening; holds out quite late; fair quality; good color; productive. Worthy of further trial.

Crawford.—This is a new variety to be introduced next spring, from Ohio. Blossom perfect. It is of large size; good form; in color bright scarlet; of good but not best quality. The past season was unusually trying to late sorts, owing to dry, hot weather, with strong winds for many days during the latter part of fruiting. The "Crawford" stood this severe test better than many of the old standard sorts. The plant is a strong, vigorous grower; productive, and well worthy of trial for home use and late market.

Daisy.—Among the new sorts, this is one of the most promising. It comes from New Jersey, and thus far appears to be a healthy, strong plant; very productive; fruit of fine size, form and color; blossoms pistillate; ripens medium to late. Should this variety continue to sustain its reputation of last season, it will be valuable for both home use and market.

Pineapple.—This variety is quite distinct from other sorts. It has a pineapple flavor that is very agreeable; blossoms perfect; fruit medium to large size; color light red or pink; too soft for market, but fine for home use. The plant is a vigorous grower and quite productive.

Gold.—A new sort from Connecticut. Blossoms pistillate; fruit of large size, of the color and form of Cumberland; appears to be worthy of trial. Our plants were received so late in the spring of 1887, that they did not have a chance to show what they could do under favorable conditions.

Excelsior.—Blossoms pistillate; fruit of medium size, second quality; not firm enough for market; of little value here.

Enhance.—This new variety is to be introduced next spring. It is one of the strongest growers in our collection; fruit medium to large size, somewhat of the Kentucky type; more firm, and darker in color than that old sort. Well worthy of trial for market.

INTRODUCING NEW FRUITS.

Many new fruits are advertised every year—a large number of which are never heard of only while they are "being introduced," and sold at high prices. Much the largest proportion of them are either of less value than many sorts already in cultivation, or only of local merit. This does not often arise from a want to defraud on the part of the originator. There are many

reasons why it is thus. First of all, is for want of testing over a sufficiently large area to gain a knowledge of their adaptability for general cultivation. They are, therefore, quite apt to look upon their own seedlings as a parent upon his children (none others equal to them), and often like the child, are valuable while well cared for at home, but when once sent adrift little more is heard of them. If a more thorough system of testing new fruits could be devised, many thousands of dollars would be saved annually. The experimental "stations" and "farms" could be made use of to good advantage for this purpose. It must be the work of horticultural and farm journals to make it popular to have new fruits tested at those "stations," and not introduced until testimonials from several of them can be published with the description given by the originator or disseminator.

The number of comparatively worthless varieties introduced would thus be very materially lessened.

Hardy Apples.

As the season for planting approaches, the question of what to plant perplexes the farmer and gardener more or less, and the more he searches the catalogues of even the most reliable nurserymen, the more his perplexity increases. No doubt, each variety has its merits for some particular locality. The greatest mistakes are made by planting soft wood varieties too far north; such varieties almost invariably die before bearing fruit. Note especially the Baldwin; in the vicinity of London, during the last five or six years, a great majority of those planted have died. The same has been the case to a very great extent with the Rhode Island Greening. These varieties, although in other respects of great merit, should not be planted north of the forty-second degree. They were some years ago all right here, but the unusual severity of the last few winters has destroyed most of the young trees planted, and some of the old ones. As the difficulty has been largely in the stock or body of the tree, those who are especially fond of these varieties may still grow them by crown grafting on the Fameuse or some other hardy variety.

One of the greatest mistakes in planting large orchards is too many varieties. Where the object is to secure a supply of fruit for the family, it is a different matter, as an apple that suits one member of the family may not suit all, hence the advantage of a variety. But for a large orchard for market, three or four varieties are sufficient. In the autumn of 1887 we visited one fruit grower, in the vicinity of Oakville, Ont., who had twelve hundred pear trees, of which seven hundred were of one kind (Beurre D'Anjou), and he regretted that he had not at least a thousand of the same out of the whole number, (see October issue of the ADVOCATE, 1887).

If a certain variety is most profitable, why not plant it almost exclusively. As to the merits of the different varieties, circumstances must govern the selection to a great extent.

Northern Spy is a grand apple for home use or shipping, being perfectly hardy, and very productive. It, however, is a little too thin skinned to stand handling well, while the flavor is superior to that of any thick skinned variety.

American Golden Russett is a hardy tree, thrifty grower, and good bearer, and for the English market is of great value, but in both the

American and Canadian North-west is not highly valued.

Ben. Davis is a hardy tree, an early and abundant bearer, sells fairly well both in England and the North-west, has a very thick skin, and keeps until late spring, and in one instance we know of them being kept from autumn to autumn.

Wagener is a vigorous grower, very hardy, early and very abundant bearer, and of medium size, very fair keeper, and of excellent quality.

Steele's Winter (Red Canada), is a fine variety for market or home use, a good bearer and hardy. These varieties, except the American Golden Russett, are red in color; they are in our estimation, the best collection of winter apples, available for market or home.

The Pewaukee is highly recommended by some of our exchanges, and our own experience is corroborative in its favor. Walbridge as well

does not ripen earlier than Early Harvest, and is considered inferior to it by many who have tested it; while on the other hand it is very hardy, and usually bears the second year after planting, and will keep longer than any harvest apple we know of.

Horticulture on the Farm as a Means of Making Home More Attractive.

BY G. C. CASTON.

How many farmers' homes we see without any outward adornment to make home attractive! Without a fruit tree or garden; with no ornamental trees or flowers; nothing to please the eye or refresh the senses. This, we believe, has a great deal to do with the tendency of our young men to leave the farm. Some will say, "Its all very well to talk about fruit and flowers and lawns, but how can farmers get time to attend to these things?" Well, "where there's a will there's a way." The farmers' children should be taught early to take an interest in such things. They should get a good education, but they should be educated with a love for their calling—for the farm life. In order to interest a boy in a pursuit which you wish him to follow, you should let him feel that he has a vested interest in it—that he is, to a certain extent, responsible for its success or failure. Therefore, let each young person on the farm have something to call their own. And what more interesting branch of farm life than the pursuit of horticulture? Therefore, let each one have a part of the orchard or fruit garden for their own especial use and benefit. Here the active, inquisitive mind of youth will find ample scope in their researches into the beauties and mysteries of nature. Teach them to graft fruit trees, and if you have any native seedlings that are no good, show the boys how to transform them into valuable trees bearing good fruit. Teach them also the art of budding, and encourage them to experiment in the art of hybridizing or crossing varieties of fruit, grain and flowers, and show them how it is done, or if you do not know get some one who does. Regard all these things as a part of their education; and just here I may remark that I hope soon to see agricultural text books introduced into our public schools. We might well dispense with something else and have agriculture instead, as we are teaching a great many things in our schools that are of no practical use to the pupils in after life.

A boy might have a few apple, pear or plum trees to care for and call his own, or a bed of strawberries, or a row of currants or raspberries, and they will not regard the care of those things a task, but it will become a real joy and pleasure to them. They need never neglect the other duties of the farm to attend to those things, as there is a time for everything. Another thing that should be encouraged in the young boys on the farm is a taste for arboriculture—the planting of trees both for ornament and shelter. It is a good plan to get the boys to plant trees. It is always a satisfaction to them in after years to see those trees growing larger and more beautiful which they planted when they were boys. They should be encouraged to plant trees anywhere on the farm where they will be useful, and especially to have a double row planted on the north and west side of the orchard and farm buildings, to serve as a protection from the cold



NORWAY SPRUCE.

meets with almost universal favor. Wealthy, although not a first-class keeper, is a very fine variety, and an early and abundant bearer. Very many varieties of Russian apples have been tested the last two seasons at the Experimental Station of the College of Agriculture, at St. Anthony's Park, Ramsey Co., Minn., but nothing definite has been as yet given us, but in the near future we hope to gain some knowledge from that source. While fall apples are not generally profitable for market, it is well to have a good supply for home use. The following varieties will be found among the best, and ripen in the order named; Duchess of Oldenburg, St. Lawrence, Fall Pippin, Twenty Ounce and Fameuse; the latter is frequently classed as a winter variety, and indeed they are often, with care, kept until spring. For summer or harvest apples: Early Harvest, Red Astrachan, Sweet Bough, Golden Sweet and Yellow Transparent, will fill the bill. Concerning the latter, we cannot concede all that has been claimed for it. In the first place, it

blasts of winter, and to protect the orchard from the equinoctial storms. If they are taught thus to take an interest in all these things, and by their help make the home more beautiful and attractive, they will have no desire to leave it. It will become the most attractive spot on earth for them. They should be taught early the dignity of honest labor, and not led to believe that life on a farm is only one of drudgery and hard labor (as farmers in reality do not work on an average as long hours as mechanics do), and, therefore, to be avoided if possible. But teach them that agriculture is the noblest, most elevating, healthful and independent calling that a man can engage in; that it is by far the most important wealth producing industry in the country; that upon its success depends the prosperity of the country, and that the tiller of the soil is in a position, if industrious, to enjoy more real luxuries fresh from the hand of nature than anyone else, be they ever so rich. He can have fresh fruit on his table all the year round, as well as choice vegetables, fresh and juicy. First, we get the rhubarb, and then the luscious, healthful strawberry, followed by raspberries, currants, gooseberries, etc., then come the plums, early apples, grapes, fall apples, and the winter varieties, if properly handled and stored, will keep fresh till the strawberries are ripe. Several varieties of grapes can be kept by packing in dry saw dust throughout the winter months, so that a wise and prudent farmer, with a well kept orchard and garden, can always enjoy the luxury of fresh fruit on his table 365 days in the year. In addition to an orchard and fruit garden, I see no good reason why a farmer should not have a well kept lawn with a few ornamental trees and flowering shrubs. This will greatly add to the beauty and attractiveness of the home, and the young people can point to it with a pardonable pride as their home. There is not only the pleasure and satisfaction derived from thus making the home and its surroundings more beautiful and attractive, and enjoying the luxuries that nature bestows so bountifully on those who seek her aid, but horticulture on the farm is also profitable, for if proper care is exercised in the selection of varieties, you can always get a market for your surplus fruit at a fair remunerative price, whether it be the product of the orchard or the fruit garden. We may well claim that life on a farm thus embellished and adorned by a skillful use of the gifts of nature, is far from being the drudgery it is sometimes represented to be. On the contrary, although I admit that there are other callings which are more remunerative, yet there is none so healthful, so pure, so elevating, so interesting, so independent, so useful and so essential to our country's welfare as that of agriculture.

As Mr. Baker truly says, a farm of his own is not yet out of reach of any able and prudent young person who takes care that he gets the right sort of a wife—a real and reliable helpmate.

A Wisconsin correspondent of Orchard and Garden avers that a solution of one pound of alum in three gallons of water proved to be as perfect a remedy against currant worms as the standard treatment with white hellebore.

When fruit trees are set it is best to keep them in cultivation for at least five years. The ground should be stirred around the trees at least every two weeks up to Aug. 1. A peck of unleached wood ashes should be sown within a circle five feet in diameter, around each tree. With this care the tree will make a strong, healthy growth early in the season, and ripen off before winter.

Mammoth Dewberry or Running Blackberry.

The plants are perfectly hardy and healthy, and remarkably productive. The flowers are very large and showy. The fruit, which ripens with the Mammoth Cluster raspberry, is often one and a-half inches long by one inch in diameter, soft, sweet, and luscious throughout, without any hard centre or core. As the dewberry roots only from the tips, and does not sprout like blackberries, this will be much more desirable for garden culture, and the trailing habit of the plant will render winter protection easily accomplished in cold climates, where that precaution may be necessary.

Lucretia.—This is a trailing blackberry; it has been entirely hardy, a vigorous grower, and exceedingly productive of large, luscious berries, ripening with the Early Harvest.

The Origin of the Seckel Pear.

The Philadelphia Press, in an article descriptive of certain portions of the Quaker City, relates the following:

The celebrated Seckel pear is another production, and this delicious fruit was first sold in the old "Sunday" market, Moyamensing Avenue, south of Federal street. This tree was discovered in a swamp on Hollander's Creek, near the inside channel, towards League Island, by an old Dutch hostler about seventy-five years ago. He kept the secret of the tree's locality for several years, but he gave the fruit to his friends and its fame spread abroad. The swamp in which the tree was located belonged to Mr. Seckel, of the brewing firm of Smith, Seckel & Pepper, who for years carried on business at Fifth and Minor streets, at what was afterwards called the old Falstaff Hotel. Mr. Seckel made search for the tree, and discovered it, had it carefully taken up and transplanted to his country seat, which is now the middle section of Laurel Hill. From this parent tree thousands of scions were cut.

Large or Small Sized Trees.

The Country Gentleman says: "For many years we have recommended the practice of setting new orchards with small or moderate sized trees, instead of those of larger growth, for the reason that the former are checked less by removal, have a better supply of roots, are dug with less injury, and are less twisted about afterwards by winds, besides costing less for railway conveyance, and requiring less labor for setting out. We find in our exchanges occasional proofs of the correctness of these views. The Rural New Yorker publishes a communication from a correspondent, giving the results of setting out in a large orchard these two classes of trees. In one instance the trees sent by the nurseryman were twice as large as ordered, with heavy freight charges, and now, after eleven years a large number have died, and the rest are unhealthy. Two years later another portion was set with smaller trees, which have now a health and vigor which the others have never shown."

It is strange indeed that this question should require discussion. It is a fact so evident to any person of any experience that an apple tree three years from the bud, and from six to seven feet high will produce more fruit, even in the first ten years, than a larger one, and besides at that time be more thrifty and vigorous than one of larger size and greater age when planted.

Soil.—For an orchard site, a deep, even if rather a poor soil, is to be preferred to one much richer, but shallow.

The Box Elder.

This tree, while comparatively unknown in Ontario, is one of the most useful of which we have any knowledge, in Manitoba and the North-west, and is, we believe, destined to be an important factor in solving the timber question in that country. When in Winnipeg, we were very much pleased with this tree, as it is perfectly hardy, and succeeds well in Manitoba and the North-west Territories. There is probably no better deciduous tree for a windbreak, if one as good. It is a rapid grower, and, if kept from running up, it forms a handsome round head with very dense foliage from its compound leaf, with from three to five leaflets. It is called by botanists, "Negundo Aceroides" (Ashleaved Maple). The staminate flowers are in small clusters, its pistillate ones in racemes, which, later, are several inches long, and decidedly conspicuous. The wood is useful for fuel, and is used for wood-turning purposes as well. The sap is abundant, and is used for making sugar, and some regard it as purer than that of the sugar maple. Aside from its value as a fuel and sugar producer, it is a very fine ornament; its symmetrical growth and neat habit making it suitable for the lawn.

Why the Russian Apricot is Valuable

1st. Because of its hardiness, standing uninjured while several varieties of the *Prunus Armeniaca* were frozen to the ground, among which were the Moorpark, Golden and Breda. Last winter in York county, this state, they stood 35° below zero, and bore a fine crop of fruit last summer, while at Des Moines, Iowa, they have stood 38° below without a twig injured. Lippincott's edition of Chamber's Encyclopedia states that in their native land they have flourished as far north as the mountains of Dahuria in Siberia. This alone ought to establish the fact that if budded on Iron Clad Stocks they will prove hardy in any part of the United States.

2nd. Thus far they have been entirely free from the ravages of insects. The curculio, so destructive to the fruit of the plum, and the borer, which destroys the peach tree, never molest the Russian apricot. Neither do the black knots, yellows, or blight. It comes into bearing as early as the peach, while its fruit is as valuable in every respect, and as it is perfectly hardy it must soon take the place of that fruit in the Northern States. It stands shipping better than the peach and will keep longer after being picked. The tree grows to the height of 25 feet. The flowers are beautiful, while its leaves are a dark livid green until frost. These combined, render it one of the most attractive trees for the lawn.—[Nebraska Horticulturist.

Manuring.—Top-dressing orchards that are not growing vigorously with fine old manure would be in order. Spread the manure evenly.

It is a good plan to experiment on a small scale, to try new methods of planting, manuring and cultivating, to test new varieties, and to ascertain which for your farm is the best.

Grapes.—In a dry place, a good fertilizer is stable manure, but avoid using it on wet ground, else the vines may become diseased; wood ashes, bone dust, and similar material would be better.

Recording maps of the orchard and fruit garden, should be kept to ensure against loss of names by loss of labels. Such are easily made by using smooth, strong, heavy paper, striking lines and cross lines as many as there are rows of trees or plants and then clearly write the name of every variety in its place.

Poultry.**Profile Must Go.**

As a result of the controversy in the matter of profile in the "Standard of Perfection," it was decided at the Buffalo meeting of the American Poultry Association, to dispense with profile illustrations; and the one thousand copies that have been printed are condemned, and will be replaced by new ones. We had hoped for longer life for the illustrated standard.

Incubators.

As this is a subject in which poultry men and many farmers are interested, we give an extract from a speech before the farmers' meeting in Plowman Hall, Boston, Mass., on Dec. 22, 1888, by Mr. W. H. Rudd, of Boston. We know the speaker to be a practical and successful poultry farmer, and what he says may be relied on. His statements corroborate those frequently made in these columns, viz.: Artificial incubation is a success, although individual incubators may fail.

We all know the objections which have been urged against incubators and the chickens and ducks that are hatched in them. So we all know the objections that have been urged against everything new since the memory of man. City water was opposed, gas was opposed, horse cars were opposed, electric cars are opposed, and we can well remember a locality where steam cars were fought tooth and nail. Almost every, if not every, community is blessed with a set of old fogies who are chronic fault-finders and kickers "from away back." Nothing is so good in their estimation as it was when they were children, and still further back in the days of their grandparents. Our modern dwellings, lighted by gas, electricity, or improved kerosene lamps, and warmed by furnaces, steam, or hot water, they regard as vastly inferior to the homes of their childhood, banked up in winter with seaweed or refuse hay to the first windows, where "soon as the evening shades prevailed," a tallow candle "took up the wonderful tale" and rendered the darkness visible, while they crowded around the open fireplace roasting their shins and freezing their backs until bedtime, when they went to roost in a large desolate chamber, which would have made an admirable modern "cold storage," and between icy sheets, the very recollection of which even now sends a cold chill down our spinal column and almost makes our few remaining teeth chatter in our head.

WITH THEM NOTHING TO-DAY IS RIGHT, but everything is wrong, and they find fault with everything and with everybody. They belong to the class described by Talmage in his lecture on "People we Meet," who never seem to be happy unless they are miserable, and who go through the world enjoying a kind of miserable happiness or happy miserableness.

A friend of ours once happened to be in Quincy market when one of the oldest dealers there was opening a box of lean, blue-meated chickens.

"Another lot of worthless incubator chickens," he growled.

"Are not incubator chickens as good as any?" inquired our friend.

"No," grunted the old man, "good for nothing. I can tell them as soon as I see them."

Now, there was no evidence whatever that those chickens were hatched in an incubator. Some

breeds of fowls, as everybody knows, have blue or lead-colored legs, and white or blue meat, and feed them as you will the meat will still be blue. Whether chickens are fat or lean, yellow or blue, depends not upon whether they were hatched in incubators and reared in brooders, or hatched and reared by hens, any more than it depends upon whether they were hatched in Rotterdam or Guatemala, and whether reared in Dutch ovens or old-fashioned warming pans. It depends upon the food and treatment they receive. But this man was a chronic fault-finder. Even the telephone, which connected him with nine-tenths of his customers, was too modern a contrivance for him. Its sharp, ringing call was too much for his delicate nervous system, and he actually had it taken out and removed. He supposed these chickens were the production of some diabolical modern innovation, and he therefore found fault with them as a matter of principle. When he could not find fault with something or somebody he was not happy, and he would doubtless have found fault even if he was going to be hanged.

Let us now examine the subject of
INCUBATOR CHICKENS.

Mr. H. T. Pool, of South Weymouth, has been a dealer in poultry for many years. His teams are constantly collecting it throughout a portion of Southern Massachusetts. He dresses it at his own establishment and brings it into the city, where, owing to its high quality, it finds a ready sale at top prices. He has passed our house every week, summer and winter, for many years, and always stops when we are at home. His faith in incubator chickens was like a grain of mustard seed. On the occasion of one hatch we said to him:—

"Now, Brother Pool, we are going to save one brooderful of these chickens, and sell them to you, instead of disposing of them ourselves, for we are willing to lose a few pennies, if necessary, for the sake of showing you how good chickens can be raised artificially."

He watched the growth and development of those chickens from week to week with much interest, and when large enough for market we placed them in his cart, asking him to report the following week. On his next trip he said:—

"Brother Rudd, those were as fine a lot of chickens as I ever bought." Now, for a man who had bought hundreds, if not thousands, of tons of poultry, who is as good a judge of it as ever stood in a pair of No. 14 boots, this was saying a good deal. Again, nobody will deny that the leading poultry dealers in Quincy market are good judges of poultry. If they are not, nobody is. Every one of them know us, and know of our poultry farm. Several of them have been there. They all know that our chickens are raised only by artificial means, and yet when we have more than enough to supply our regular customers, these same marketmen eagerly buy them, and would buy ten times as many, if we had them to spare.

Mr. Peter writes us that he has hatched sixteen chicks out of twenty-one fertile eggs with the Gerred Incubator, manufactured by the Gerred Incubator Company, 98 DeGrassi St., Toronto. This is certainly a good hatch, considering the season.

Feed your poultry with warm mashes in the morning, grain and vegetables at noon, and bright corn at night, all they will eat up clean. Make them scratch in straw for the whole grain, and give warm drink three times daily; also animal food in some form. This treatment should make them lay.

Eggs as Premiums.

We will give a setting of eggs of any variety, from the yards of any breeder advertised in our columns, to any person sending us five new subscribers and five dollars. Eggs will be carefully packed and delivered to Express Co. in first class condition.

Setting Hens.

BY W. C. G. PETER.

As the spring season advances, the thrifty farmer, or his wife, begins to think of chickens, and, as a necessary adjunct, of setting hens. Now, it seems a simple thing to do; one may say, "why any one can set a hen." True, but how vexatious it is after coaxing, or forcing her into the desired spot and closing her up, to go next morning and find her like the Dutchman's hen—sitting standing.

Some men have a very choice vocabulary that is only brought into requisition at the setting-hen season of the year. But I never could see that a hen was either influenced or intimidated while the unusual eloquence was flowing from the tongue of her perspiring owner. Thinking it may save some trouble, I will tell you my plan of nests, kind reader. These, if carefully cleaned out and put away after using, will last several seasons. The nests are made thus: Take light lumber and make a box about 20 inches long and the same in height, by about 18 inches deep, or say, 20 inches square; leave one side open and put a strip on the lower part about 3 or 4 inches wide to keep the nest material from getting too much spread, and the eggs from falling out; make a door of lath strips to finish the front, and attach it to the side of the box by strips of leather, or hinges; have a hook and ring to fasten it by, and you can shut the hen in and she cannot desert the nest. I always give the setter two or three china eggs till she gets accustomed to her new place and used to coming off when I open the door. In most cases two days is sufficient, for "biddy" soon finds out it is a comfortable home. I always put dry sand in winter to the depth of two or three inches, and on that make a nice soft nest of short straw, built all over the box and nicely hollowed to form a snug nest, out of which no eggs can roll to get cold. Some hens will leave the nest too often if they are allowed opportunities to get off when they please, and in early spring the eggs are soon chilled, and all chance of a hatch of early chicks is gone. And it is the early bird that pays, for pullets will be laying when eggs are dear, and cockerels can be put into the market when they command best prices. Let the hen off for feed every morning, and if she will not get off of her own free will, lift her off and shut the door, she will then get used to being fed regularly, and will not break the eggs by trying to get off at such times as you are not near to attend to her. It is far better to make her come to your wishes, for he is a clever man who can ever hope to fall into her whims—one day she wants to get off in the morning and the next in the evening, and you are bothered beyond measure to keep track of her. One person can attend to forty or more sitters, and have them back on their nests in less than half an hour, by adopting this plan, being careful to close each door while the hen is off feeding so that they cannot change nests. For while one hen will sit on any nest at all, another is very particular, and will have her own at any cost,

and a general free fight ensues, and instead of a demure and quiet flock of happy, matronly biddies, one has a host of termagants to pacify and subdue. From March till the end of April, nine eggs are enough for a hen to get the best results, at least in this northern part. Try this plan, friends, and see if you are not repaid for giving up the old-time custom of having the hens sit all over the farm, in odd corners, some so high that the chicks are killed by falling out, some under wood-piles, and you only suspect they were there when you find their mangled remains; some in your last new buggy, and other undesirable places. Let your wife or daughter have a small place where each hen can be put to hatch her brood, and all looked after at the one expense of time and trouble. If you have a lot sitting at once, sew a piece of cloth on the hen's leg and tack a piece like it to the nest she occupies, and you will find it an easy plan to get them all back to their proper places. They will get very quiet if treated gently, and that is the only way to use them, for if you can get mad you will find a hen can get madder.

A Laying Eration.

Supposing the hens were of the right age to lay, I would give them a warm cooked breakfast every morning about as soon as they could see to eat it. For these breakfasts I would boil potatoes, or turnips, apples, carrots, any refuse vegetable that I might have, mash them while warm, and mix into a stiff dough with fine wheat bran and a little corn meal, say about one-third of corn meal to two-thirds of bran. Sometimes I would use ground oats instead of the bran and corn meal. I would season it always with salt just about as I would if I were going to eat it. And if I had no milk, no ground raw bone, no sunflower seed for my fowls, I would mix in ground meat scraps every morning in the proportion of a pint to every twenty hens. If I had the milk, raw bone, etc., I would omit the meat every other morning, and on those days give either milk, a ration of raw bone, or sunflower seed. If I could have all the milk that my fowls could wish I should keep it by them all the time and feed no meat, only raw bone two or three times a week. I shouldn't give the fowls all they can hold of this mixture, only about a tablespoonful apiece. I should want them to be hungry enough after breakfast to go right to scratching after the few handfuls of grain I should scatter among the litter on the floor. At noon I should throw a little more grain, oats, buckwheat, wheat, or wheat screenings into the litter, and at night give a meal of grain—whole corn two-thirds of the time.

An invalid lady a little time since, not being strong enough to do heavier work, gave her attention to poultry. She furnished wholesome food, constantly, for her family; made good sales in the markets, and housed large lots of manure for the general purposes of the farm.

Almost every man who buys eggs from fine stock and gets a bad hatch writes to the seller, "those eggs were all rotten." Now an infertile egg will not rot during the usual time of incubation, hence if the eggs rot it is evidence of straight business on the part of the seller, but the failure is from some local cause over which probably neither party had control. The following from the Southern Cultivator corroborates our experience: "The person who sells fine eggs, and the person who buys them, are equally anxious for them to hatch well. A good hatch makes them feel kindly towards each other, but a bad hatch causes them both to think that something was wrong."

A Voice Against a Canadian Shropshire Record.

DEAR MR. WELD.—I have sent copy of the enclosed letter for publication in the Live Stock Journal, in reply to an article in the February issue of that paper, on "The Necessity of Forming a Shropshire Record for Canada." I should be glad if you could see your way to publish it also, as it relates to a live subject.

Very truly yours,
JOHN DRYDEN.

To the Editor of the Canadian Live Stock Journal:

SIR.—I ask a little space to express a few thoughts in opposition to those advanced in the article in your last issue referring to "The Sheep Breeders' Association for Canada."

Will you allow me to say that the demand for this Association comes from persons occupying two different positions. One class is anxious for the organization for the purpose of advancing the interests of sheep breeding in general in this country. The other class is demanding it only for the purpose of providing a means of registration in Canada for certain classes of sheep at present bred by them. Let me say, at the outset, that with the latter class I have no sympathy whatever, and I think in saying that, I only voice the opinion of many of the more prominent sheep breeders in Canada to-day. Undoubtedly, there are several questions which at present might engage the attention of a vigorous wool-growers' association. But they would be questions of a general character, and not specially applicable to any single breed.

Your argument that one ought to exist in Canada because one exists in the United States, is not, I think, a very strong one. The separate breeds in the United States are represented by separate associations; and I think a careful inquiry will convince you that the National Wool-growers' Association is kept in existence principally by the danger of attack from the tariff agitation which has been going on for some time. Take that away and I venture to say all the work concerning sheep breeding will be left to the associations organized in behalf of special breeds. I am decidedly opposed to the multiplication of registration books for any breed or class of domestic animals. No one who has not had experience will understand the amount of time which must be consumed in preparing registrations, especially for sheep, for these various places of entry. Besides, it means simply an additional tax on the men who undertake to breed any class of pure-bred animals.

I submit, that the business will not stand this heavy drain, and unless some good object or reason can be shown, it ought not to be undertaken.

Your strongest reason is, that at some future time the Americans may demand for the registration of Canadian-bred animals, or those bred in England, such a sum as would practically shut them out from registration. Now, why not say that there is danger that this Association will demand from those living in New York State, the same fee? I submit, there is just as much danger of the one as of the other.

The American Shropshire Association is composed entirely of breeders of these sheep living in all parts of the American continent. Those living in Canada have an equal voice and equal rights with those living in New York or Ohio. And from my knowledge of the spirit of the men who are engaged in this work it is almost insulting to suggest the danger of any such occurrence. With the evil effects of such a course adopted by the South-Down Association, the Jersey Club and the Hereford Association staring them in the face, surely our Shropshire breeders will never consent to be imitators of it. It is one evidence of the result of a false system of protection, which never results in a blessing, but is always a curse.

You will excuse me if I say also that your article has a slight tinge of bitterness which I would rather see suppressed. You say that the opponents of Shropshire registration in Canada are less than a half-dozen, who have "personal reasons" for preferring American registration. I am at a loss to know what these "personal reasons" can possibly be. What personal reasons can I have that you do not have? In my opposition to a second registration book, I think I am only advocating the interests of every breeder of this class of sheep in Canada. Do you mean this statement as a personal fling at those of us who are seeking to cultivate the American trade?

I had always understood that the Editor was decidedly in favor of reciprocal trade with the United States, but in this article I find language which is calculated in the first place to arouse indignation on the part of our American neighbors, and in the second place to excite prejudice among Canadians against those who seek to cultivate American trade relations.

I am afraid, Mr. Editor, when noses come to be counted your half-dozen will be seen to be multiplied very largely.

At all events, you may count me as a vigorous opponent to Canadian registration of Shropshire sheep, which I am now breeding. I say nothing against the registry of other classes, if the breeders wish, but I do say that there is no necessity whatever for a second registration of Shropshire sheep while the first is fulfilling, as it is to-day, all the requirements of those bred either in Canada or the United States. In union there is strength; why seek to divide and give weakness? While I say this, I shall not oppose the formation of an association of wool-growers in general, having for its object the discussing of such questions as affect all breeders of sheep alike, but favor such an organization, and am prepared to assist it.

Ayrshire Importers' and Breeders' Association.

The annual meeting of the Ayrshire Importers' and Breeders' Association of Canada, was held in Montreal on the 5th February. There was a large attendance of members. Mr. Wm. Rodden, of Plantagenet, Ont., President, in the chair, and Mr. S. C. Stevenson as Secretary. After the reading of minutes of previous meetings, and their adoption, the report of the Executive and the Finance Committee was presented. It contained the following statements: A copy of the bank account for the year 1888, showed a balance to the credit of the Association, on the 1st of January, 1889, of \$466.50. The new members, including those from Ontario and State of New York, make 65 on the list. The resignation of Mr. Geo. Leclere as Secretary was accepted, and the President, as authorized, had made arrangements with Mr. S. C. Stevenson, to continue the duties of Secretary-Treasurer, at his office 76 St. Gabriel street, Montreal, to whom the President has transferred the work of receiving entries for the 3rd volume, which is now opened with No. 5000. A new set of forms, accompanied by rules and instructions for entering will be furnished free to breeders. The second volume is closed, and the contract for printing awarded to Messrs J. Lovell & Sons. It was determined to proceed with the publication of the balance of the first volume, which remained unbound, and was paid for. In view of the importance of accuracy in pedigrees, it was considered advisable to have the work on volumes one and two thoroughly examined and revised by two competent and disinterested persons, this has been accomplished, after a full and complete examination of the written and printed volume one, and the accompanying entry papers, vouchers and voluminous correspondence, the clerical and typographical errors have been made right, and are being printed and bound in the books. The second volume is thoroughly verified in the same way before printing. Both the first and second volumes are found to contain only pedigrees of pure-bred Ayrshires, tracing directly to reliable importations. Since the printing of the first volume, much information has been obtained in the last three years, from survivors of families, from former employees, from books of auctioneers, and catalogues, and from pedigrees given to buyers, some of which went to the United States and the west, thus assisting in completing pedigrees, formerly only known as having been bred from the importations of Lord Dalhousie, Montreal Agricultural Societies, Messrs. Gilmore, McKenzie, Gibb, Penner, Hutchison, Logan, DoCs, Gordon, Miller, Ewart, Cameron and others. The dates of importations and the names of many of the animals are received in corroboration of their importation, and now some of their produce identified, particulars of which will be found in the second volume, being printed. To avoid future difficulty it was urged on breeders to, at home, enter births at once, and record invariably before exhibition time. The practice of selling Ayrshire grades for pure-bred animals might be put a stop to in the interest of farmers, if every county Agricultural Society kept the herd books of this association in their Secretary's office to enable members to refer to them and detect frauds, which, it is to be regretted, have occurred in some sections distant from access to books that have only pure-bred in them. The report of the Executive Committee and its suggestions were adopted. The President's report and address were read and approved. The report detailed the large amount of work done in assisting breeders in all Canada by collecting information to perfect pedigrees, and much that had been done by personal subscriptions of members to pay clerks, expenses, and still keep down the cost of entry fees. The details of the report go to show how much can be done by patience and persevering care in such work, managed by farmers themselves, if attention is given to it. The merits of the dairy herds of Great Britain and of Canada were fully detailed, and evidence was produced to show that the Ayrshire cow produced a large flow of excellent milk at less expense than any other breed. Further evidence of this is found in the improved condition in the homes of the Scotch and Canadian Dairy farmers, owners of Ayrshires, and the fact that the best milk, butter and Canadian cheese for family use is produced where the pure Ayrshire blood has been introduced. Ayrshire breeders have not pressed their cattle on public notice as much as they might have done, considering their comparative merits as dairy cattle. The President suggested improvements and advantages that might be secured for the members of the association, and while he congratulated them on the present improved condition of their herds and their office, and considered it important to enlist their young friends in official duties, and prepare them for continuing the progress already made. On motion of Mr. James Stephen, seconded by Mr. Muir, it was unanimously resolved to tender the thanks of the meeting to the President for his valuable reports, suggestions, information and assistance. The election of officers was proceeded with. The meeting would not now agree to the President's resignation, particularly in view of the difficulty in replacing him, and the importance of having at hand his experience, while the second volume was in course of publication. Finally he agreed to remain for a time on condition that when volume two was printed his resignation would be accepted without hesitation when again offered. Mr. Drummond and Mr. Beaulieu were unanimously re-elected Vice-Presidents, Mr. S. C. Stevenson, Secretary-Treasurer, and the same Executive Committee was continued, adding Mr. A. Muir, Mr. J. Drummond and Mr. E. A. Garth were elected auditors.

MARCH
"Why
I asked
As sh
At th
That le
"Kind
In you
And
To be
His sof
She ha
Came a
I bow
Deem
For tw
Phot
out of
her pa
As the
pang of
I had l
An un
tell me
broad
—slow
close to
of whic
of any b
I had l
"Yes
earth n
cripple
would
"I ain
panion
from w
pains of
no use
might
a conti
He bu
face as
realize
He can
sure th
ears: t
"I an
man ne
He g
turned
"Not
"Bist
"By
here—w
not hav
He w
peniten
"I an
any det
me for
Here
taking
drew
he was
perform
Direc
and bef
I saw p
"The
the rec
son's n
poor b
scribed
"I see
"But I
Miss C
"Miss
tancy,
of her
face, h
ful."
"So is
"Talk
turning
"I am
and in
tired."
"And
yours a
"I th
speeche
"But m
"We,
this sor
"Go
new ac
see me
"Tha
"Her
and the
"Mot
"tell m
"He l
gray ey
I think
All th
matter

Family Circle.

Solitude.

"Why are you lingering here, I pray?"
I asked of a maiden fair, one day,
As she sat on a stile,
At the end of a mile,
That led to a copse with flowers gay.

"Kind str," she said, "oh hush, oh hush,
In yonder copse there dwells a thrush,
And oft to the stile my work I bring,
To hear the charming wood-bird sing,
His soft sweet notes to his mate in the bush."

She had scarcely spoken, when over the stile
Came a bright young man with a blush and smile—
I bowed politely, and walked away,
Deeming it prudent no longer to stay,
For two are company once in a while.

—E. M. S.

HIS MOTHER'S STORY.

CHAPTER I.

Phoebe Carroll was singing; while I was so taken out of myself by the thrilling, appealing tones of her pathetic voice, that I had forgotten my boy. As the song ended, I turned to look for him with a pang of self-reproach, but he was still sitting where I had left him, his broad back to wards me.

An undefined something in his attitude seemed to tell me that he was troubled or ill at ease, so I threaded my way through the little knots of people—slowly, so as not to attract attention. Standing close to him were a young man and a girl, neither of whom I knew. I paused when within a few feet of my boy's chair, and listened to their conversation, turning over the leaves of an album.

"Yes," the girl was saying; "there is nothing on earth more sad. I would rather be deformed—a cripple, deaf, or dumb—than blind. Oh, I think I would rather die than lose my sight!"

"I almost think I would too," answered her companion. "What would there be to live for, shut out from work and pleasure alike! And the bitterest pain of all would be, not only to know you were of no use in the world, but to feel that, however they might attempt to disguise it, you were a burden and a continual anxiety to those you—"

He had caught my eye and broke off abruptly, his face assuming an expression of astonishment as he realized that I was signing to him to follow me. He came, however, and I led the way until I was sure that our words could not reach my boy's sharp ears; then I said:

"I am sure you cannot be aware that the gentleman near whom you were standing is blind?"

He gave a hasty glance in that direction, then turned a dismayed look on me.

"Not really, is he? May you not be mistaken?"

"Mistaken! He is my son!"

"By Jove! I am sorry! How could I dream—here—what a brute you must think me! I would not have said what I did for worlds!"

He was so thoroughly in earnest, and looked so penitent, that I held out my hand to him.

"I am sure you would not. I quite acquit you of any desire to wound. In return, you must pardon me for interrupting your conversation."

Here I bowed and half turned away, while he, taking the hint, returned the inclination and withdrew. But before I had moved a step from the spot he was back again with our hostess, Mrs. Buke, who performed the ceremony of introduction.

Directly after we were exchanging commonplaces, and before long I had introduced him to Phillip, who, I saw plainly, recognized his voice in an instant.

The young man was evidently anxious to efface the recollection of his unfortunate words from my son's mind, and he strove so effectually that the poor boy's face cleared up as he listened. He described or quizzed almost everyone in the room.

"I seem to see them all," said Phillip, presently; "But I think there is one you have not mentioned—Miss Carroll, who was singing a little while ago."

"Miss Carroll!" he repeated, with a slight hesitancy. "It is difficult to say anything good enough of her. She is fair, and very sweet-looking; her face, her figure, and her expression are all beautiful."

"So is her voice," said Phillip, and became silent.

"Talk of the angels—" said Mr. Vores; and turning, I found Phoebe Carroll at my elbow.

"I am going," she said, giving her hand first to me and then to each of the young men. "Mamma is tired. It has been a delightful evening to me."

"And to me," said Phillip, quietly. "That song of yours alone would have made it so."

"I thought you knew how I disliked pretty speeches, Mr. Muller," she said, coloring faintly.

"But mamma is looking for me; good night."

"We, too, must go, Phillip," I said, knowing that this sort of evening was apt to weary him.

"Good night," he said, shaking hands with our new acquaintance. "I wish you would come in and see me some day, when you are in our direction."

"That I will. You live—"

"Here is the address," and I handed him a card; and then I guided Phillip away.

"Mother," he said, when we were at home again, "tell me what he is like—this Vores?"

him, though he always called up a smile when I spoke, and made an effort to appear interested.

Once or twice I asked him what was wrong, but he merely said, "Nothing, dear; I'm right enough!" so that I was forced to be content.

But in the evening, when I read to him, as I was in the habit of doing, I missed his laugh at the touches of humor or quaintness, and knew that his thoughts were elsewhere.

I laid the book down at last, and going to his side, passed my hand over his dark hair.

"Phillip, dear, tell me what troubles you? May not your old mother know?"

He shook off my hand, and answered, impatiently: "Must I always be talking, mother? Must I be ill or something because I'm silent? What a fidgety little mother you are!"

I sat down again and took up the book, but had no heart to go on with the story. There was little more said until bedtime, but when I said good night to Phil he kissed me tenderly.

"Your eyes are wet, mother! You have been crying because I let off my ill-humor on you!"

"As much for your reserve as for your impatience, dear. Be open with me, darling!"

I followed him into the darkness of his room, for he never had a light there, and stood holding his hand, unable even to make out the outline of his form, waiting for his confidence.

"Why must I grieve you, mums?" he said, at last. "It is only the old pain, and I did not want to tell you, for it seems like a reproach. Oh! mother, mother!" and a sigh, that was almost a groan, tore its way from his breast. "I think I never felt what it was to be blind till now! It is death in life! There—forgive me! I know that I am cutting you to the heart! I can feel you shrink and tremble! Go to bed, and let me fight it out alone!"

"Oh, Phillip! I thought you had learned resignation! I wish you had left me to die that night in the fire, for then you would have had only a pain to bear that time softens for everyone!"

His hand was on my lips almost before the sentence was ended.

"Hush! Never say that, mother! We have been very happy, we two, for nearly four years. I shall never be open with you again if it makes you talk like that. Let us go away to the sea as soon as ever we can; the sea breezes will blow away my gloomy moods. There! I am myself again! Good night."

He led me to the door, and before I had time to remonstrate the bolt was slipped within.

CHAPTER II.

"Phil," I said, the next afternoon, "I have been thinking over your suggestion. What do you say to the neighborhood of Pensance again? If you would like that, I'll write at once, and see whether we can have the rooms we had before."

"And I have been thinking, too," he answered, with a short laugh, "and I don't want to go. It was but a fancy; I have thought better of it to-day."

I was surprised and rather disappointed, for I thought the change would have dispelled the cloud that hung about him, and restore him to himself. But I said no more, and just then the door-bell rang.

It was Mr. Vores. He seemed to bring a new atmosphere with him as he entered, and very soon his brightness had communicated itself to my son, so that his face regained its usual cheerfulness.

"I have soon kept my word, you see," he said. "As it happened, business did bring me this way; but are you ill, Mrs. Muller?"

"Ill!" I repeated. "No. Why?"

"I should scarcely have recognized you. I beg your pardon, but really you look ill."

"I did not sleep well last night, that is all," I tried to reply, carelessly, for I saw Phillip turn his head quickly in my direction.

"You did not tell me, mother," he said.

Nelson Vores changed the subject, and was soon deep in a political argument with my boy, to whom I read the papers daily, so that he was as well informed of what was going on as most people.

The acquaintance so oddly begun soon ripened into intimacy. As the time slipped away we grew to know him well, and not only him, but his whole family—father and mother, brothers and sisters. Phoebe Carroll was sometimes there, for she and Alice Vores, the eldest sister, were old friends.

Spring changed into summer; autumn tints began to appear on the few old elms in our neighborhood, and still the shadowy clung to my poor Phil. Only at such times as we were quiet alone I saw it; at others he was as he used to be, and see what time would do, and endeavored more than ever to find him interests and pleasures in which he could join. He would not listen to my suggestion of leaving town.

"Unless you need the change yourself, darling," he said, when I proposed it; and I sometimes wondered whether it would be wrong to get him away under that pretence.

One autumn evening, Nelson Vores and his sister Alice were at our house. I went up with Alice when they were going, and then she said something that gave me a sudden chill.

"What is wrong with Mr. Muller?" she asked, lowering her voice, as though she feared its sound might reach those below.

"Wrong, dear?"

"Yes. He is growing to look so thin and haggard. Nelson is quite concerned about him. I suppose you, seeing him every day, notice the change less than we who only meet him at intervals?"

"Perhaps that is it," I answered, almost coldly, for it hurt me that anyone should know more of his appearance than I.

When they were gone I looked at Phil, and my

heart sank. After closing the door upon the pair, I had re-entered the room so silently that he did not hear me, and now for a minute I could watch him without his knowing. Only a minute, and then he had caught a half sigh that would have vent.

"You there, mother!"

"Yes, dear." I drew my chair to his side, and took his hand in mine. "Phil, dear, will you always wear a mask before me?"

He was taken aback. I felt his start, and he turned his head, seeming to look at me.

"If I do it is to save you pain."

"Phillip, it breaks my heart!"

Then he told me the truth at last. He loved Phoebe Carroll.

We sat there in silence, after he had told me all, I trying to stifle a feeling of jealousy. It had never seemed possible that he could fall in love.

"Have you ever asked her, Phil?"

"Mother!"

"Why not?"

"Ask her to devote her life to a poor helpless wretch like me! I would die sooner!"

"Phillip, do you think I have ever felt what I have to do for you a burden?"

He raised my hand to his lips.

"Hush, mother! That is different. There, I have told you the truth—all my long folly and madness. All these months I have been struggling to crush it out—with what success? Mother, we will go away. Help me, and I will not yield again to the longing to be near her. Let us go!"

"Darling, do you think she guesses?"

"She does not. In that at least I have been strong."

The next day but one I went to Phoebe Carroll.

"Phoebe," I began, with a futile endeavor to control my unsteady voice, "I am in trouble."

In an instant her arm was round me, her soft cheek against mine.

"Can I help you?" she whispered. "Tell me what I can do?"

"It is about my boy."

"Is he ill?"

"No—yes. Phoebe, he has learned to love someone; and he is blind!"

She turned very pale, and her head sank on my shoulder.

"Poor fellow! I am afraid she does not care for him. But if she did, what would his blindness matter? She would feel it the greatest happiness she could know to wait on him, to make him forget his loss. If she did, he would be ten times dearer for his very helplessness."

"For a time perhaps, Phoebe."

"For always. I am certain of it."

"But you think she does not care for him?"

"I feel sure she does not."

"Quite sure, Phoebe?" And I drew back and looked searchingly into her eyes. Her lip quivered, and a rush of color flooded her face and neck.

"Do you not mean Alice Vores?"

"Phoebe, I mean you. He loves you, dear; he is wearing himself out with fighting against it. He has told me how it is, and I have come to you. Can you help me?"

"How?"

She was trembling, and kept her face away; but I knew the truth.

I took her straight back with me, and together we entered the room where Phillip was sitting.

"Whom have you there?" he asked, for Phoebe was too much agitated to speak.

"Phoebe," I said, "my boy, I have told her."

"Mother!" he cried out, reproachfully, starting to his feet, and then covered his face with his hands. She ran to him and drew his hands down, to hold them tightly in hers.

"Why did you not tell me, Phillip? I have been waiting so long!"

He tried to draw back, but she would not let him. I crept away.

A week after this Nelson Vores came again.

"Where have you been all this time?" Phillip asked him, after the first greetings were over. "I have missed you. And what's up? Your voice is not like itself."

"I have been out of sorts, and it seems too bad to you to bring the blues here. But I thought I would come to-day to see if your patience and cheerfulness would shame me into a better state of mind."

"What is it, Nelson? Money troubles?"

"No. I'll be frank with you, old man. I have been dreaming of making a home of my own, with the sweetest woman the earth contains for its mistress. But it was only a dream after all."

He walked up and down the room once or twice, and then resumed his seat.

"It may prove reality yet," said Phillip.

"No. There is someone else, she says. There, don't say any more about that. I am not the first who has been roughly awakened. And you look so contented, Phil, I almost think it must be a blessing to be blind."

"It seems strange," said my son, thoughtfully. "Here you, with all you have to offer, are refused; while I, with nothing on earth to recommend me, have won what I never dared to hope for. I am going to be married."

"You are? I am very glad. Lucky fellow!"

"To Miss Carroll," Phillip added. "It seems an awful sacrifice on her part, but I am human."

Nelson Vores started as though he had been struck, and his very lips went white. His eyes met mine, and he saw what I understood.

A minute's pause, and then he said, quietly: "I congratulate you with all my heart."

When he went away he beckoned to me, and I followed him into the hall.

"Never tell him," he said, in a whisper. "It would only sadden him. Promise me?"

And I promised.

Blow, Wind, Blow!

Now the snow is on the ground,
And the frost is on the glass;
Now the brook in ice is bound
And the great storms rise and pass.
Bring the thick, gray cloud;
Toss the flakes of snow;
Let your voice be hoarse and loud,
And blow, wind, blow!

When our day in school is done,
Out we come with you to play.
You are rough, but full of fun,
And we boys have learned your way.
All your cuffs and slaps
Mean no harm, we know;
Try to snatch our coats and caps,
And blow, wind, blow!

You have sent the flowers to bed;
Cut the leaves from off the trees;
From your blast the winds have fled;
Now you do what you may please.
Yes; but by and by
Spring will come, we know,
Spread your clouds, then, wide and high,
And blow, wind, blow!

—Eudora S. Bumstead, in St. Nicholas.

MY GUIDE.

In the summer of 1889 I had occasion to visit the Rushmoor Asylum for the Insane. The institution is, I believe, reckoned among the best of its kind in this country. The distinguishing feature in its system of treatment is that of according to patients all reasonable freedom—a system, I am informed, which has been followed with the most encouraging results. So far as practicable, the inmates of the asylum are treated like sane men and women; and instead of being constantly reminded of their infirmity, they are led to forget it, if the power to forget it remains.

On the day of my visit I had purchased a case of medicines for one of the assistant physicians, who was an intimate friend. This I had done at his request, and it was to deliver these medicines that I made the journey to Rushmoor Asylum.

Ascending the massive stone steps, I was conducted by one of the attendants into the reception parlor. Here I was left to wait until my presence could be announced to my friend, Dr. Balcom. It so happened that I was the only occupant of the room, and to engage my mind while I waited I picked up a copy of De Quincey's "Confessions" and began to read. While thus occupied, a voice accosted me, saying, "Did you wish to see any one, sir?"

Looking up, I saw the speaker was a small, neatly dressed man, who had entered unobserved, and who had evidently addressed me in order to make his presence known.

"I am waiting," I replied, "to see Dr. Balcom."

"The doctor is engaged just at present on a very important case. Would you like to make a tour of the building?"

I answered that I should be pleased to do so, and thereupon my friend conducted me out into the hall. I discovered that he was one of the attendants in the asylum, and he also informed me that he studied insanity for a number of years, with a view of fitting himself for a physician.

Under so excellent a guide I was conducted through the building, and shown the numerous points of interest. Those patients whose cases possessed particular interest were also pointed out to me, and their idiosyncrasies fully explained.

"The man whom we just passed," said my companion, referring to a large, fresh faced, mild eyed patient, "is one of the most dangerous patients we ever had."

"Indeed!" I replied; "one would not think so from looking at him."

"No; but the appearance of all insane people is deceptive. There was a woman here some time ago a pale, sweet faced, delicate creature—whom we all thought a saint, and who acted as one until she succeeded in getting hold of a carving knife, and then she cut the throats of two of her fellow patients."

"Is there not danger," I asked, "in granting so much liberty to the inmates?"

"Well, it is our peculiar system. We find in some instances, of course, that the freedom is abused, but in the majority of the cases it works well."

This and much more conversation took place between the attendant and myself as we passed through the halls. I was most favorably impressed with his intelligence and manners, and the thought struck me that he was fitted to fill a higher position than that which he occupied.

"I observe," he said, "that you carry a medicine case, and I infer that you are a physician."

"No," I rejoined; "although I have the equipments of a doctor, I should make but sorry work at using them. They belong to Dr. Balcom, and I called to deliver them." Then, looking at my watch, I added, "I fear that I am keeping the doctor waiting by my long absence."

"I think he is not yet disengaged," returned my companion; "we shall have time to go out on the roof of the building, from which the views are really magnificent."

Accordingly my guide led the way up the spiral staircase, which connected the topmost story with the roof, I following at his heels. As we emerged through the broad skylight the scene which presented itself to the eye was really magnificent. To the right lay the river, winding like a silver thread through the pleasant valley; in front could be seen the distant spires of the city, glistening like the

sunlight; and afar off rose the hills, their summits lost in the blue of the heavens. The carefully kept grounds of the asylum, immediately beneath us like a map, gorgeous with its many hues of flowers.

"This is certainly a splendid view," I said.

"It is still better from the opposite side of the building," returned my guide. "Let us go over there."

Accordingly we walked along the flat roof, the attendant taking the precaution to close the skylight behind us, lest any of the patients should be tempted to follow us. The Rushmoor Asylum is some two hundred and fifty feet in length, and as we emerged from the westerly end of the roof we had this considerable distance to walk.

Suddenly, when we had reached a point midway in the building, my companion stopped, and turning upon me abruptly, said: "Have you a large brain?"

I looked at him a little wonderingly, and then laughed as I replied: "Well, if I have, the world has not discovered it."

"Don't jest, sir," he said, petulantly, and with a seriousness that flashed an unpleasant suspicion across my mind. "I wish to know, distinctly, whether or not you have a large brain?"

He was looking me full in the face, with a peculiar expression in his dark eyes which I had not before observed. There was not the slightest betrayal of levity in his manner. He was terribly in earnest. His thin white fingers worked convulsively, and there was a twitching about the muscles of the mouth, such as I have seen in persons suffering intense pain. The horrible truth flashed upon me as I returned his steadfast gaze.

This man was a maniac. I am possessed, I fancy, with an average amount of courage, but at that moment I felt it oozing out of the very pores of my skin. I know that I turned deathly pale, and for a moment was utterly unable to think. Then I grew calmer. Doubtless this maniac had brought me on the roof of the building with the idea of pushing me off. As I have already said, he was a small man. Physically I was his superior. But I was without weapon of defence. Suppose that he was armed!

"My good sir," I said, endeavoring to speak in a natural tone, "I can assure you that my brain is not a large one, and as my time is limited, I think we had better go down now."

I made a movement as if to retrace my steps to the skylight. Quick as thought the madman sprang in front of me, and, with his eyes glaring wildly, albeit he spoke in a low, unexcited voice he said:

"I think your brain is large enough for my purpose, sir. You must understand that I have a great mission in this world to fulfill—a mission which I have not as yet begun. The strain upon my own mental faculties will be too great. I therefore intend to take your brain and insert it in my own head."

Here he drew from the breast pocket of his coat a large sized clasp dagger, which he opened, and began to run the blade up and down the palm of his hand.

"I have given years of thought to this subject," he continued, "and I am convinced that I shall succeed, with a double brain power, I shall be enabled to accomplish a double amount of brain work. I have been waiting a long time for a subject, but not until I saw you did I find one suited to my purpose. You are the man—the brain for which I have been watching."

"I fear, sir," I said, "that you are sadly mistaken. Your idea is a grand one—an original one. But I am not fit to aid you in carrying it out. You should select a strong, active, healthy brain. Mine, on the contrary, is weak and diseased. Why, sir, up to the age of 14 I was considered an idiot. Since then my friends do not permit me to have control of my own affairs. I am actually little better than a lunatic. I can neither read nor write, I—"

"Nevertheless," he interrupted, "you will answer my purpose, and I am about to take out your brain with this dagger, and insert it in my own head. I have brought you out here on the roof that we may be free from interruptions. You will oblige me by now lying down."

If my mind had been stunned by the first discovery of the man's madness it was active enough now. A thousand schemes rushed through my mind; I took in the situation fully. I was alone with a maniac armed with an ugly weapon, and he bent upon my destruction. To cry out would be useless. Nobody would hear me. The chances of any aid from those within the asylum were small indeed. I could not run away. If I attempted to gain the skylight I should certainly be killed. The medicine case in my hand suggested the thought which saved my life.

"If you are determined to make use of such an unworthy subject as I," I said, "well and good; I shall offer no further resistance. But I ask that you will grant me five minutes while I address a brief farewell to my friends. I will give it to you to deliver to them."

"Very well," he replied, "if you know how to write, proceed. I will wait five minutes."

He took up his position a foot from me, watching every movement I made with horrible eagerness. I knelt down with my back towards him, took from the medicine case a bottle of chloroform (which I knew it contained) and saturated my handkerchief with the liquid. This I succeeded in doing without his knowledge. Then, rising to my feet, I scribbled some unintelligible words upon the back of an envelope, and said:

"You will do me the honor by reading what I have written here."

He came towards me, and while I held the envelope in my hand stood by my side and looked at the writing. I had the handkerchief in my right hand and the envelope in the left. As he bent forward to decipher the words I suddenly clutched his

hand which held the dagger, and at the same instant clapped the handkerchief over his mouth and face. He struggled fiercely for a moment or two, and then the fumes of the drug began to tell upon him. His efforts to release himself grew weaker, and he finally fell to the floor insensible.

With all haste I made my way to the skylight, down the spiral staircase and into the halls below. There I recounted what had happened, and two of the assistants were sent to bring down the murderous maniac. He recovered from the effects of the chloroform, and the last I heard of him he was looking for a subject to furnish him an extra brain.—Philip Hargrave in Boston True Flag.

Fashion Notes.

The round brooch is given preference over the long lace pin.

The brown Alpine hat is always trimmed with five rows of heavy cord about the crown.

Short veils for bonnets have a spring wire in them. They are preferred with small spots in them.

Sensible women who have a tailor-made suit of wool, also have an extra vest. The cost is trifling.

Young ladies with pretty throats now wear broad turn-down ruffs of lace, mull or silk gauze with dress toilettes.

Huge cut-glass inkstands, holding enough of the fluid to entitle them to be called "wells," have silver tops with the monogram or crest upon them.

In black garments of all descriptions, the material must always be rich, or the effect is shabbiness. Never buy cheap velvet. It proclaims at once there is cotton in its manufacture.

This is said to be the season of buttons, but the distinction should be shared by ornamental pins. As many as seventeen pins, each made of a glittering metal, are seen on one new bonnet.

Roman-red redingotes and jackets are trimmed with black braids, galloons, furs or passementeries, and are among the leading top garments this winter. They are now called Russian coats or military top-coats.

Velvet bonnets, hand decorated with gold or silver spangles or beads, are worn by dressy girls and women. All sorts of spangles may be obtained ready for sewing on, and, if properly applied, form an elegant and inexpensive decoration.

A graceful and pretty way to trim a bodice is to take a broad gros-grain ribbon, slightly gather it on one end, and fasten on one shoulder; it is then carried across the bust and down to the opposite hip, where it is drawn in, and long loops and ends fall down half way on the skirt.

While the long coat is charitable in concealing under its ample folds a worn or soiled skirt, one must not presume too much upon its good offices. It may, of course, hide a shabby gown, but a dress should never remain unattended or unbrushed because it will not be seen. One great secret of good dressing lies in maintaining every portion of one's toilette in good order. And how important a part the proper use of the mending-basket and the clothes-brush plays in preserving this desirable state of things may be observed by a glance at the toilette of some women who have neglected both.

Truth, affability, mildness, tenderness and a word which I would fain bring back to its original significance of virtue—I mean good nature—are of daily use; they are the bread of mankind and staff of life.

Minnie May's Dep't.

MY DEAR NIECES,—The month of March reminds us that spring will soon be here again, and with it the rush of work both out of doors and in, for the dear old house-mother has to take a hand in all and everything as it comes, and tired body and brain has not even the rest required at night, for often, too weary to sleep, we rise unrested and unrefreshed to resume our walk in the treadmill of daily life. But it need not be a treadmill to any of my nieces, who will help herself by thinking; we can take care that our work does not accumulate so as to crowd us. Our spring sewing can be done by degrees now, and much of the summer sewing too, and how delightful to sit down to rest with the feeling that there is nothing waiting to be done. Take some afternoon and look over all the clothes, laying aside all those that require mending, and those that require altering. If you are the happy possessor of a sewing machine the work is very much expedited, and you can take an afternoon and run all the seams you possibly can on the machine, then fold and place in your mending basket to be finished in the evenings, as you rest in your easy chair and enjoy a chat with family or friends. Take another hour or two to cut out and make what other garments you will require for the little ones, these can also be finished in the evenings, keep all in a basket with buttons, hooks and eyes, tapes and thread. It is a bad policy or else bad management to run your sewing machine at night, we should secure a few hours quiet out of the twenty-four when every member of the household is weary from work or play. And now, my dear girls, a word about easy chairs. I do not approve of occupying them upon all occasions, but I do say they are essential and absolutely necessary to rest in. All the muscles should be relieved from the tension they have been compelled to bear since early morning, either standing, walking, stooping or sitting on a hard stiff-backed chair. So many cheap and pretty basket chairs are made now, the cost need not deter anyone, and a cushion of bright chintz does give it such a cozy, inviting look. I should like to see every member of the family have their easy chair; the girls should have rockers to theirs, the gentle motion is very soothing. The appetites of the family will be found to vary more, there is not the same vigorous hunger as when the keen frost prevails, more variety should be provided, and vegetables should be served oftener, and every morning either boiled rice, hominy or oatmeal should be served for breakfast, and coffee or cocoa should take the place of tea for a time. Our preserves and pickles are getting low, so we should serve our own nice winter apples made into a variety of sauces, and as eggs and milk can be had in abundance now, a variety of delicious puddings can be concocted, so with cranberries, they keep easily, and are always welcome with their fresh tartness, and seem to be relished more at this season of the year than any other. I shall give you some simple recipes for cooking apples and cranberries in this number, and when you have tried them you will agree with me that they are appetizing and wholesome.

CRANBERRIES.

Take one quart of cranberries, pick all the defective ones out, wash and put into a saucepan with a teacupful of sugar, just cover with water

and stew slowly until very tender, pour into a basin to cool.

CRANBERRY JELLY.

One quart cranberries, stew until tender in enough water to cover them, mash and rub through a collander, return to the saucepan and add one teacup of sugar, boil slowly until thick, pour into a mould wet with cold water, turn out when hard.

BAKED APPLES.

Peel nine apples, scoop out the blossom and stem ends, put a little piece of butter in the hollow, and cover with sugar, put into a pudding dish with a cup of water, bake until soft.

APPLE SAUCE.

Peel one dozen apples, slice, and add a sliced lemon, half a teaspoonful of ginger and a cup of water, with sugar to taste, cook slowly until well done, turn into a basin to cool.

APPLES IN SYRUP.

Peel and quarter some hard apples, make one pound of sugar into a thick syrup with a little water and a pinch of cinnamon, when boiling put in the apples, cook until clear, remove from the syrup, and after boiling it down a little more, pour it over them.

BAKED APPLES.

Peel one dozen large apples, core and slice, put into a stone jar with a little water, a cup of sugar, and a little piece of lemon rind cut small, cover and bake in the oven for two hours; they should be a nice red color when turned out.

MINNIE MAY.

Minnie May offers a prize of a beautiful silver napkin ring for the best article on "How Every Girl can Furnish her own Room." All communications to be in by the 25th of March.

Recipes—

A PRETTY WAY TO SERVE COLD FISH.

Cut medium-sized cucumbers in half; scoop out all the seed part with a spoon; fill with cold boiled salmon or lobster, and pour a mayonnaise over. Serve one-half to each person.

A PRETTY WAY TO SERVE TOMATOES.

Small tomatoes, hollowed out and filled with chopped celery, with mayonnaise poured over; ornament with some fresh water-cress stuck in the top.

Little dishes of small, round radishes make pleasing bits of color on the table.

CHEESE STRAWS.

Roll one-quarter pound of rich puff paste until flat, and about one-eighth of an inch thick; cover with grated cheese; double over and roll again, adding more cheese; roll to one-quarter of an inch thick and cut in stripes as thick as a lead pencil. Bake, in a slow oven, a yellow color; tie four together with bright narrow ribbon and serve.

VEGETABLE PIE.

Crust.—Half a cup of butter, rubbed thoroughly into the flour, with a little suet, one cup of sweet milk, or, if obtainable, two-thirds of a cup of sour cream, in which has been dissolved half a teaspoonful of soda; roll out with as little flour as possible, and line with it a deep dish or pudding bowl, and fill with alternate layers of rolled bread crumbs or crackers, minced onions, tomatoes (canned ones answer), and grated potatoes; season with plenty of butter, salt, pepper and parsley. Cover with crust and bake in quick oven from half to three-quarters of an hour.

CHEESE TOAST.

Toast stale bread, cut in thin slices, a fine brown; pour over it boiling water, drawing off again as quickly as possible; butter well, sandwich with toasted cheese, and serve hot.

TURNSIPS.

This homely vegetable is not half appreciated by house-keepers, for, when nicely cooked, it is both delicious and wholesome, and can be had all the winter.

Pare and cut into dice an inch square, boil until nearly done in as little water as possible; drain off the water, add a little salt, two or three spoonfuls of cream and a beaten egg; toss over the fire for one minute, and serve hot.

Wash and peel, cut across the grain and boil quickly; drain off all the water, mash fine and set over the stove until quite dry; add a small piece of butter and serve.

Wash in clean water, dry on a towel, set in a hot oven and bake until tender, and serve just like baked potatoes. A little piece of dripping rubbed on the skin before putting them into the oven improves their appearance.

HOUSEHOLD HINTS.

After long use sponges are liable to smell very badly, unless carefully cleaned every day. By rubbing a fresh lemon thoroughly into the sponge, then rinsing it several times in lukewarm water, it will become as sweet as when new.

Pare a lemon very carefully without breaking the thin, white inside skin; put it inside a wild duck and keep it there for forty-eight hours, and all the fishy taste so disagreeable in wild fowls will be removed. The lemon should be removed and a fresh one put in its place as often as every twelve hours. A lemon thus prepared will absorb unpleasant flavors from almost all meat or game.

POLISH FOR BRASS.

Grate bathbrick and mix with sweet oil; apply with a piece of flannel, and wipe off with a soft cloth.

Decorations at a High Tea.

At a high tea given recently by a lady of taste and wealth the floral decorations were abundant, and some of them exhibited new designs. In the hall a pair of large elk horns over the hat rack were trimmed with glossy ivy, which trailed downward over the frame of the mirror below, across the face of which were delicate sprays of autumnal Japanese maple glowing in warm tints. Directly opposite, at the entrance to the front parlor, hung masses of bignonia, the deep golden tints of the flowers showing to good advantage against the emerald tints of the foliage. Twined around the crystal chandelier in the parlor were fine fronds of asparagus tenuissimus, and throughout the apartment were hundreds of perfectly-formed La France roses, arranged exquisitely in clusters and baskets. The back parlor was devoted to chrysanthemums in shades of yellow and pink, and they were so disposed that the most artistic effects were produced. Scarlet hollyberries and the attractive foliage of the manzanita tree were combined in the tasteful decoration of the billiard room. The dining room also came in for its share of embellishment, many baskets of chrysanthemums ornamented it, and the finishing touches were made with sprays of Japanese maple, which trimmed the mantle mirror.—Fashion Bazaar.

Ingrowing Toe Nail.

After a rather prolonged foot bath, and as gentle but thorough cleansing and drying of the nail as possible, I introduce by the aid of a brush, into the interstices between the nail and the fungosities, a solution of gutta percha in chloroform, (gutta percha, ten parts; chloroform, eighty parts). I have this application repeated several times the first day, and less frequently the following days. —Dr. Patin.

Good Sleep.

Those who are subject to indigestion in any form seldom sleep well. Therefore, neither indulge in hearty suppers, nor go to bed hungry. While a heavy meal ought not to be taken within at least three hours of bed-time, a warm snack before retiring will often dispose one to sleep comfortably. Insufficient open-air exercise during the day is the sure precursor of a bad night's rest. In the holiday season towns-folk find that exposure to country or sea air makes them both hungry and sleepy. A brisk walk on a breezy night has a somnolent effect, but it is better that the body be wearied, rather than fatigued, on retiring to rest. Sleeplessness is due in many cases to lying too long in the morning, or indulging in sleep during the day. A short nap before dinner is more refreshing than one after; just as exercise is better before than after meals. A persisting habit of keeping awake in bed may be cured by curtailing the hours of repose. If the skin be not thoroughly cleansed refreshing sleep cannot be expected. An occasional warm bath before bedtime has a salutary effect, but cold baths are only safe for the robust. An evening dip in the "briny" during the hot months usually ensures tranquil repose. When sleeplessness cannot be traced to any of the common causes here stated, it may then be considered as a symptom arising from some unsuspected disorder lurking in the system.

Gems of Philosophy

- Lobstein—Charity is not an action; it is life.
 Luther—To do so no more is the truest repentance.
 Magoon—Truth is like a torch; when shaken it shines.
 Landor—There is a vast deal of vital air in loving words.
 Bartol—Character is a diamond that scratches every other stone.
 Bonnard—Silence is the wit of fools and one of the virtues of the wise.
 Thomas a Kempis—All is not lost when anything goes contrary to you.
 Diderot—Few persons live to-day, but are preparing to do so to-morrow.
 Epictetus—What we ought not to do we should never think of doing.
 Lessing—A single grateful thought toward heaven is the most effective prayer.
 George Macdonald—Some people only understand enough of truth to reject it.
 Countess de Gasparin—The saddest thing under the sky is a soul incapable of sadness.
 Schiller—A merely fallen enemy may rise again but the reconciled one is truly vanquished.
 Feltan—Comparison more than reality, makes men happy and can make them wretched.
 Froude—You cannot dream yourself into character; you must hammer and forge yourself one.
 Matthew Henry—No great characters are formed in this world without suffering and self-denial.
 Colton—Men will wrangle for religion, write for it, fight for it, die for it; anything but live for it.

The Great Snowy Owl.

The winter or late autumn brings, at times, a visitor from the far north, the great snowy owl, *Nyctea nivea*. I came upon him the other day, crouched in the long, dead grass which whistled in the cold wind, while the snow squalls swept along the far horizon; he turned his great black eyes on me for a moment and took wing. No bird that I ever saw has such motive power; the first flap of his broad wings sends him far forward or upward. Nothing reminds you of the steady, straight flight of his congeners; he bounds up and swoops down, turning in any direction with all the ease and lightness of the swallow. A few seconds and his great bulk is a speck at the horizon; a moment more and he has vanished, while you still stand aching in wonder at his grace and speed and power. He certainly has small reason to forego his southern trip; when the arctic winter comes on, breadths of latitude can be nothing to him. A few days, or a fortnight at most, will allow him to pass over the stretch that separates his arctic home from us, and still gives him time to stop for rest and feeding by the way. His natural vigor and power of wing is so great that the severe cold of the sub-polar regions, and the passage of the great distance that separates it from us, are both sustained with ease, evidently, by this magnificent bird. —[Vick's Magazine.]

Housekeepers Ought to Know.

- That cranberry jelly mixed with cold water makes a refreshing drink for sick persons.
 That it is as absurd to get a body to do good work on an empty stomach as to attempt to fire a gun that is empty.
 That brooms dipped for a minute or two in boiling suds once a week will last much longer than they otherwise would.
 That a neat, clean, fresh, aired, sweet and well managed house exercises a moral as well as a physical influence over its inmates.
 That one can have the hands in soap suds without injury to the skin if the hands are dipped in vinegar or lemon juice immediately after.

Canon Farrar says:—"A life spent in brushing clothes, and washing crockery, and sweeping floors—a life which the proud of the earth would have treated as the dust under their feet; a life spent at the clerk's desk; a life spent in the narrow shop; a life spent in the laborer's hut, may yet be a life so ennobled that for the sake of it a king might gladly yield his crown." A writer referring to this speaks of the well-known picture of Murillo in the Louvre, representing the interior of a convent kitchen, in which not mortals, but white-winged angels appear at the lowly work. One is putting the kettle on the fire, one is bearing a pail of water, another is taking down plates from the kitchen dresser. A teacher full of enthusiasm in her work, recently undertook to teach in an out-of-the-way district in New York State. Her school-house had no ornament on it, no trees near it, no conveniences in it; right by the side of a dusty road, in reality, no better than an old red barn. Could she teach a good school in such a place? And the pupils! Just like the old school-house; uncombed hair, unwashed faces, soiled cloths. What could she do with them? But she did something with them, and in doing this something she secured success. Teachers do not think that success needs expensive surroundings, or a good salary; but it does mean knowledge of the means by which it is got, and a determination to use these means. —[N. Y. School Journal.]

Uncle Tom's Department.

MY DEAR NEPHEWS AND NIECES:—Your Uncle Tom is glad that he has an opportunity of writing to his young friends at a shorter interval than usual, and hopes that all of them read his last letter attentively, and took to heart the advice he gave. He will read you another little lecture this month. Some, if not all of you, have perhaps written the copy, "Procrastination is the thief of time," without thinking what it means. Procrastination is perhaps the besetting sin of most of us, young and old; for we all feel like putting off things that we have to do, which we do not regard as pleasures, thinking that any time will do for them. How often have some of you put off learning your tasks because you wanted to play in the bright afternoons, thinking that after tea would do for your lessons, and then found yourselves so tired and sleepy that you could not study a word. And what was the result? Mortification and shame, next day, when the good places you had previously worked hard to get were lost through your carelessness. The habit of having a time for everything, and doing everything at the allotted time, cannot be too early learned. Your Uncle Tom speaks from his heart, as he has more than once suffered pain and mortification from putting off till to-morrow what should be done to-day. Want of punctuality is a form of procrastination. When we look around us we can see the working of the laws of punctuality. What a state we would be in if summer were three months later in relieving winter of its turn in the change of seasons; and how we would grumble if we had to wait three months later than usual for strawberries. By want of punctuality we make life harder to others, though we would not hesitate to grumble if others treated us in a like manner. One of Britain's greatest heroes, Lord Nelson, owed his success in a great measure to his strict observance of appointed times, and nothing angered him more than the carelessness of others in this respect. Your Uncle Tom is sorry he can't write you a longer letter this time; but if it takes less time to read his letter, you will have more time to work out the puzzles and enigmas this month. **UNCLE TOM.**

MY DEAR BOYS:—I promised in my last letter to you to tell you something about pigeons. Many of you keep them, I suppose, but few make them pay expenses. You should always count the cost of all pets. Keep an account book of all you buy in the way of new stock or food for them. Then enter in the book what you get for them when you sell them; and if they are not profitable you cannot be managing them right, so you must find out where the mistake lies. Perhaps you are buying grain at too high a figure, or you may have made unprofitable exchanges with some of your friends. There are many ways of going behind; so see that your profit and loss will balance every month. Pigeons sell for twenty-five cents per pair, and they are fit for market at three months old; so they do not cost much to rear them. Do not keep too many. A flock of twenty will be as much as you can manage. Begin on one pair first; they will breed every month, two each time; so you see how fast your twenty will accumulate. Keep your pigeon house clean; sweep it up every few days; and their feeding trough

and water
 ally. Pig
 bright tin
 they will
 fresh and
 there are
 breeds.
 pretty fan
 fancy bree
 stock bird
 to our co
 colors, fro
 some of n
 how he g
 very glad

(TO BE

Shrewd
 summers,
 successivel
 standing s
 ing sign
 "Simon S
 maker.
 sphy, sedu
 stitched s
 sturdy som
 rach, Sila
 sugar, sta
 stirrups,
 satins, sha
 selfish Sha
 saws, ska
 stuffed sof

Some se
 Samuel, s
 where. S
 Spriggs.
 Sam seld
 Sam sign
 Sophronia
 Simon stor
 ed so silly,

Strange
 mer sales
 brained sir

"Softly
 smitten; "

"Sentim
 "Smitten

Sally's snu
 smashed S
 spools. "

sillings sha
 Scowling
 swiftly sho
 ing Sam, s

"Sam, "

snappy; s
 smoking s
 stop spruc
 short. Se

See Soph
 sprightly,
 Sophia spe

"So soon
 still.

"So soon
 "specially

So Sam,
 shaking stu
 Sophronia
 Spriggs. Sh

and water vessels should be washed out occasionally. Pigeons are fond of a bath. Have a bright tin pan full of water sitting in the sun; they will take a bath every day if the water is fresh and clean. All pigeons are pretty, but there are some lovely birds among the fancy breeds. But what boy would care to kill a pretty fan-tail or carrier pigeon? Besides, these fancy breeds always command a higher price as stock birds. So for the present we will stick to our common little barnyard pigeon, of all colors, from copper color to pure white. And if some of my boys would write and let me know how he gets along with his flock, I should be very glad to hear from him. AUNT GRACIE.

Simon Short's Son Samuel.

(TO BE READ ALOUD BY THOSE WHO LISTEN.)

Shrewd Simon Short sewed shoes. Seventeen summers, speeding storms, spreading sunshine, successively saw Simon's small, shabby shop still standing staunch, saw Simon's self-same squeaking sign still swinging, silently specifying: "Simon Short, Smithfield's sole surviving shoemaker. Shoes sewed superfinely." Simon's spry, sedulous spouse, Sally Short, sewed shirts, stitched sheets, stuffed sofas. Simon's six stout, sturdy sons—Seth, Samuel, Stephen, Saul, Shadrach, Silas—sold sundries. Sober Seth sold sugar, starch, spice; simple Sam sold saddles, stirrups, screws; sagacious Stephen sold silks, satins, shawls; sceptical Saul sold silver salvers; selfish Shadrach sold salves, shoestrings, soap, saws, skates; slack Silas sold Sally Short's stuffed sofas.

Some seven summers since Simon's second son, Samuel, saw Sophia Sophronia Spriggs somewhere. Sweet, sensible, smart Sophia Sophronia Spriggs. Sam soon showed strange symptoms. Sam seldom strayed, storing, selling saddles. Sam sighed sorrowfully, sought Sophia Sophronia's society, sung several serenades slyly. Simon stormed, scolded severely, said Sam seemed so silly, singing such shameful, senseless songs.

Strange Sam should slight such splendid summer sales. Strutting spendthrift! Shattered-brained simpleton!

"Softly, softly, sire," said Sally. "Sam's smitten; Sam's spied some sweetheart."

"Sentimental schoolboy!" snarled Simon. "Smitten! Stop such stuff!" Simon sent Sally's snuff-box spinning, seized Sally's scissors, smashed Sally's spectacles, scattering several spools. "Sneaking scoundrel! Sam's shocking silliness shall surcease!"

Scowling Simon stopped speaking, starting swiftly shopward. Sally sighed sadly. Summoning Sam, she spoke sweet sympathy.

"Sam," said she, "sire seems singularly snappy; so, sonny, stop strolling streets, stop smoking segars, spending specie superfluously; stop sprucing so, stop singing serenades, stop short. Sell saddles, sonny—sell saddles sensible. See Sophia Sophronia Spriggs soon; she's sprightly, she's stable, so solicit, sue, secure Sophia speedily, Sam."

"So soon—so soon!" said Sam, standing stock still.

"So soon, surely," said Sally, smiling; "specially since sire shows such spirits."

So Sam, somewhat scared, sauntered slowly, shaking stupendously. Sam soliloquises: "Sophia Sophronia Spriggs Short—Sophia Sophronia Spriggs Short, Samuel Short's spouse—sounds

splendid! Suppose she should say—Sho! She shan't! she shan't!

Soon Sam spied Sophia starching shirts, singing softly. Seeing Sam, she stopped starching, saluted Sam smilingly. Sam stammered shockingly.

"Spl-spl-splendid summer season, Sophia."

"Somewhat sultry," suggested Sophia.

"Sar-sartin, Sophia," said Sam.

(Silence seventeen seconds.)

"Selling saddles still, Sam?"

"Sar-sar-sartin," said Sam, starting suddenly.

"Season's somewhat sudorific," said Sam, stealthily stanching streaming sweat, shaking sensibly.

"Sartin," said Sophia, smiling significantly.

"Sip some sweet sherbet, Sam."

(Silence sixty seconds.)

"Sire shot sixty sheldrakes, Saturday," said Sophia.

"Sixty? sho!" said Sam.

(Silence seventy-seven seconds.)

"See sister Susan's sunflowers," said Sophia, socially, scattering such stiff silence.

Sophia's sprightly sauciness stimulated Sam strangely; so Sam suddenly spoke sentimentally.

"Sophia, Susan's sunflowers seem saying 'Samuel Short, Sophia Sophronia Spriggs, stroll serenely, seek some sequestered spot, some sylvan shade. Sparkling springs shall sing soul-soothing strains; sweet songsters shall silence secret sighings; super-angelic sylphs shall'—"

Sophia snickered, so Sam stopped.

"Sophia," said Sam, solemnly.

"Sam," said Sophia.

"Sophia, stop smiling. Sam Short's sincere. Sam's seeking some sweet spouse, Sophia."

Sophia stood silent.

"Speak, Sophia, speak! Such suspense speculates sorrow."

"Seek sire, Sam, seek sire."

So Sam sought Sire Spriggs. Sire Spriggs said:

"Sartin."

Romieu, the famous Parisian wit, was one day caught in a shower, and forced to seek refuge in a doorway of the Opera House. It was six o'clock already, and he had an engagement at the Café de Paris for that very hour. The rain fell in torrents. There was no carriage to be had. He had no umbrella. What was to be done? While he was lamenting his bad luck, a gentleman with a large umbrella passed by. Romieu was seized with a sudden inspiration. He rushed out and grasped the stranger by the arm, and gravely installed himself under the protecting umbrella. "I am overjoyed to see you," he immediately began. "I have been looking for you for two weeks. I wanted to tell you about Clementine." Without giving the stranger time to express his surprise, Romieu rattled away with gossip and anecdote until he had led the unknown companion to the door of the Café de Paris. Then he glanced at him with a face of well-feigned astonishment.—"Pardon, monsieur," he cried; "it seems I am mistaken."—"I believe so," said the stranger.—"The deuce!" added Romieu. "Be discreet; don't repeat what I have told you."—"I promise you."—"A thousand pardons?" Romieu hastened within the café, and, amid great laughter, told the adventure to his friends. Suddenly one of them said, "your cravat is rumpled." Romieu put his hand to his neck and turned pale. His pin—a valuable sapphire—was gone. On further examination his purse and watch were found to be gone. The man with the umbrella was a pickpocket.

The Lost Ring.

"Please tell me a story, auntie," said little Ethel, one stormy afternoon.

"If this weather continues, my stock of stories will soon be used up," said Ethel's pretty young aunt, but she laid her book aside just the same, and sat down by the little girl and began: "When I was six years old, my Uncle George brought me from Boston the prettiest present you can imagine. It was in a little white box. Can you guess what it was?"

"A muff," said Ethel, who had a new one.

"No; something very small."

"A little watch."

"Smaller than that."

But Ethel could not guess until auntie said: "Something to wear on one's finger."

"Oh, I know—a ring."

"Yes, a lovely little ring, set with two rubies and a pearl," said auntie. "I was so pleased and so careful of it that they let me wear it all the time, although it was an expensive ring and did not fit very tightly."

"I had two playmates whom I loved very dearly, a black and white kitten called Spot, and a half-grown chicken named Peter."

"When Peter was little his mother used to peck at him and drive him away from her, until at length I took pity on him and cared for him myself. He was very grateful, and would follow me everywhere. I asked sister Annie to find a good name for him, and she said 'Peep' would be a perfect fit, but I thought 'Peter' sounded better, and chose that instead. He learned to know his name, and would come whenever I called him. I felt sure he and Spot understood everything I said, and I used to talk to them as other girls do to dollies. I did not like dollies. They couldn't run about with me like my pets."

"One day after I had been playing hide-and-seek among the haycocks with Spot and Peter all the morning, I came in to dinner and found, when I was washing my hands, that my dear little ring was gone. How I cried! The whole family helped me look for it, father and mother and all, but it was of no use. The ring was nowhere to be found."

"I felt so badly that I couldn't play all that afternoon. Peter seemed to sympathize with me, I thought, but Spot was as frolicsome as ever. I sat down on the doorstep in the afternoon, almost heart-broken, and said: 'O Peter! won't you and Spot help me find my ring? You know I would do anything to please you.'"

"Spot only climbed the wooden piazza posts in reply, but Peter looked carefully about, turning his head first one side and then the other, and began to scratch among some loose straws that were lying scattered about, and what do you think! There was the ring beneath them."

"I ran to mother with it, so happy I could hardly speak, and then I ran back to Peter and hugged and kissed him more than he liked, I am afraid. Afterward I made him a nice dish of Indian-meal dough, with plenty of corn sprinkled in it like plums, as I could think of nothing he would like better, and he seemed very much pleased with it. I thought Spot seemed a little jealous, but I wasn't quite sure."

"Thank you, auntie," said Ethel, and then she ran off to play at being auntie herself, and she acted the whole story very nicely, with the old cat for Spot and the baby's rubber chicken for Peter.

Local Attractions.

"My mother's got a prettier face Than your mother has," said Ray To his little four-year-old cousin Grace, In a boy's most lordly way.

The Old Rocking Chair.

My grandmother sat in the old rocking chair (But she was n't my grandmother then), And her pert little face was bewitchingly fair

A Composition.

The house cat is a four-legged quadruped, the legs as usual being at the corners. It is what is sometimes called a tame animal, though it feeds on mice and birds of prey.

Lawyer—And so you really think, Bobby, of becoming a lawyer when you grow up? Bobby—Yes; my Uncle James thinks I ought to be a lawyer.

Puzzles.

1-DECAPITATIONS.

No man should lack my whole, Beheaded, all men belong to me; Behead again, I am greater than a king, Now cut off my head and I can see.

2-NUMERICAL ENIGMA.

My 3, 10, 1, 6, 4, 18, 12, 8, 13, is want of covering. My 14, 2, 15, 9, 5, 17, 7, 20 is strength.

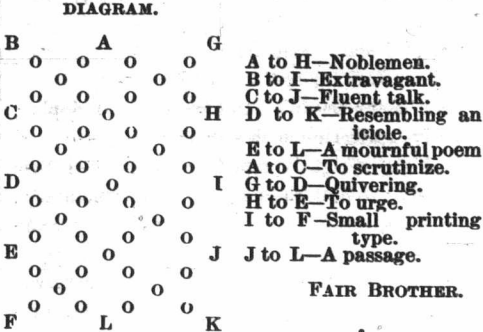
3-DROP VOWEL PUZZLE.

-ll th-ags w-m-r-t-ls c-ll -r-w-n -r-m-r-t-ls t- -nd q-ckly fl-w-n! B-t c--ld th-y-ll f-r-v-r-st-y. W-s-n fr-m th-m w-ld p-ss-w-y.

4-A SQUARE WORD.

An animal. A girl's name. To bring up. Title of nobility.

5-HAT RACK.



6-DECAPITATION.

If to find my total you intend, You must take a long step, my friend. Behead me once, I'm short and ready, Among all hunters that are steady.

7-ILLUSTRATED REBUS.



8-NUMERICAL ENIGMA.

My 7, 16, 2, 6, 8, is used for lifting. My 10, 21, 24, 20, 23, 32, is warfare. My 22, 25, 28, 34, 5, is a train of followers.

9-CROWN PUZZLE.

For the first line please write an interjection; "An English island next," is my direction. On the third line, a high priest, and some East Indian princes; (If you have guessed it now, the fact your cleverness evinces).

A European river your guessers next may find, For the fifth, a sweet substance, "if you will be so kind."

For though this crown May seem, at first, a mystery, If you read down, You will find, if not blind, Two famous kings of history.

10-CHARADE.

J--t-k-h-m-j-y, -nd m-k--pl-o--th-gr-t-h-r-t f-r-h-r, -nd g-v-h-r-t-m-t-gr-- -nd ch-r-sh-h-r, th-n sh-w-ll c-m-nd-ft-w-ll-s-ng-t-th--

11-DROP VOWEL PUZZLE.

Wh-n w--r-d wr-tch-s s-nk-t-sl-p, H-w-h--r-ly s-ft th-r sl-mb-rs b, H-w-sw-t-d-d-th-t-th-s-wh-w-p, T-th-s-wh-w-p-nd l-ng-t-d--M-r.

12-TRANSPOSITION-LATI-PRUCAN.

Ma, kewayma, keway, forwil dkl Ngmar chl hearl she Rald sint thelar chab ove Myhe ad blowl Nyenoi sybug lersbio!

Answers to February Puzzles.

- 1-Caprice. 2-F t y meRry slu Mber incrEased otteRburn footSteps sheFfield squiRrels decIded trEnt IND 3-Ottawa. 4-What do you do with your might. 5-CHOIR HERN ORB CHAIN HERN AIM ART STAIN TEAR ARC HORN IN R

- 6-Gulp-plug; rats-star; live-evil; able-elba; snip-pins. 7-Up-on. 8-Knowledge is proud that he has learned so much. Wisdom is humble that he knows no more. 9-There is no winter in the heart Of him that does a useful deed; Of what he gives he has a part, And this supplies all he needs. 10-Patent, paten, pate, pat. 11-I am going to tell you about our friendly boys. They have had a splendid Christmas. Austin got a rabbit and a black cat. John got a silver powder-horn and a long-bow.

Names of those who have Sent Correct Answers to Feb. Puzzles.

Henry Reeve, A. T. Reeve, Frank Riddle, A. L. Shaver, Clara Rillance, R. Buchanan, Ed. A. Fairbrother, M. A. Wiggins, Emma Dennee, Naomi J. Danbrook, Archie Lampman, Flora McDougal, Morley T. Boss, Annie Harland, L. C. Watt, Robert Wilson, Cecelia Fairbrother, Lobbie Hindley, Hy. D. Pickett, Anna K. Fox, A. Howkins, A. Russell Boss, Mabel Clazie, I. May Flewelling, Earnest Smythe, Jessie Murray, Elsie Ireland, Thos. McQueen, E. Eulalia Farlinger, Charles S. Laidman, Helen Connell.

The maid expects Her beau to-night, And fills the stove With anthracite, Because the air Is raw and damp, But quite forgets To fill the lamp

Just as Mr. Hag duced his is not kno clause pres papers pos extend on not more charged on newspaper present. on the agr well know Canada ar consideration Parliamen against th tax, while granted a lating aga will be rec in the hist journals s the farmer they shou for nearly standard agricultur but expect Governme grant this place this specific ta servants r agricultur of time takes effe the exis scribers. stitutes an hold indig when it b politics ar will be to his inte all wealth farmer. that he m of feeding handicapp benefits t him injur words. V vote on th The Ce Dominion favor of th tine again dian Nort the Unite United St present r States ca rise to an of the Bri ing of B stock. T be tamper I am g farm jour more and each year.

POSTSCRIPT.

The New Postal Act.

Just as we go to press we learn that the Hon. Mr. Haggart, Postmaster-General, has introduced his new Postal Bill, the full text of which is not known to us yet, but we know that one clause prescribes that the free delivery of newspapers posted from the office of publication shall extend only to those published at intervals of not more than seven days. All others will be charged one cent per pound. Daily and weekly newspapers are still to be carried free, as at present. We look upon this as a direct attack on the agricultural press of the country. As is well known, all the best agricultural papers in Canada are monthlies. Do these deserve no consideration at the hands of the Government, or Parliament? Why, we ask do they discriminate against the farmer's papers, imposing on them a tax, while all political journals are actually granted a bonus, in free postage? This is legislating against the farmers in a forcible way, and will be received in a most hostile spirit. Never in the history of Canada were good agricultural journals so much needed, or of as much value to the farmer as now. Instead of being discouraged, they should be encouraged. The ADVOCATE has, for nearly a quarter of a century, been one of the standard agricultural papers of America, purely agricultural and non-political, it asks no favors, but expects fair treatment, and we look to the Government and the Dominion Parliament to grant this. If, however, they are determined to place this additional burden on our farmers, a specific tax in order that *political friends and servants* may go free, we ask in behalf of the agricultural press of Canada, that such a space of time will elapse before this new act takes effect to allow all publishers to fulfil the existing agreements with their subscribers. In the meantime the Farmer's Institutes and all other farmer's organizations should hold indignation meetings. The time has come when it behoves every farmer to lay aside party politics and insist on laws being passed which will be to his benefit, and not directly opposed to his interest. We are an agricultural country, all wealth must come first through and by the farmer. Other trades and callings should exist, that he may be aided in, and repaid for his work of feeding and clothing all, and not in every way handicapped, and bled to the last drop. What benefits the farmer benefits all; what injures him injures all. Actions speak more loudly than words. Watch your M. P.'s and see how they vote on this question.

The Canadian Gazette says:—We hope the Dominion will pay no heed to the movement in favor of the abolition of the ninety days quarantine against Montana cattle entering the Canadian Northwest. Canada is now recognised in the United Kingdom as free from disease. The United States is not. Let Canada abolish her present restrictions against the importation of States cattle, and she will unquestionably give rise to an increased demand on the part of some of the British Agricultural journals for the closing of British ports against all imported live stock. These quarantine regulations must not be tampered with; the risk is too great.

I am glad that we have one independent farm journal published in Ontario. I find it more and more interesting as well as instructive each year. JAMES CRAWFORD, Minesing, Ont.

NEW ADVERTISEMENTS.

SPECIAL NOTICE.

THE FARMER'S ADVOCATE refuses hundreds of dollars offered for advertisements suspected of being of a swindling character. Nevertheless, we cannot undertake to relieve our readers from the need of exercising common prudence on their own behalf. They must judge for themselves whether the goods advertised can, in the nature of things, be furnished for the price asked. They will find it a good rule to be careful about extraordinary bargains, and they can always find safety in doubtful cases by paying for goods only upon their delivery.

ADVERTISING RATES.

The regular rate for ordinary advertisements is 25c. per line, nonpariel, or \$3 per inch. No advertisement inserted for less than \$1. Special contracts for definite time and space made on application.

Advertisements unaccompanied by specific instructions inserted until ordered out, and charged at regular rates.

The FARMER'S ADVOCATE is the unrivalled advertising medium to reach the farmers of Canada, exceeding in circulation the combined issues of all the other agricultural publications in the Dominion. Send for an advertising circular and an estimate.

Breeders' Live Stock Sale Association.

3rd Semi-Annual Sale of Horses

MARCH 26, 27 and 28, On Western Fair Grounds, London. Make your entries at once.

DOUGLAS W. GRAND, Manager, 205 Dundas St. 278-a

AUCTION SALE

—OF THE ENTIRE STOCK OF—

AYRSHIRE AND JERSEY CATTLE,

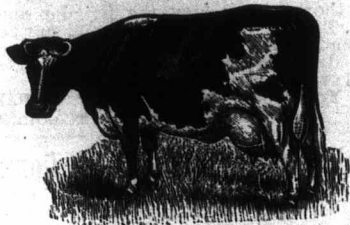
HORSES AND PIGS.

ON TUESDAY, MARCH 19th, 1889.

Farm sold. Please send for Catalogues to

E. W. Ware, 22 Jackson St. West, HAMILTON, ONT. 279-a

AUCTION SALE OF THOROUGHBRED HOLSTEIN CATTLE



of the Wyton Stock Breeders' Association will be held at

WYTON, ONT., APRIL 19TH, 1889, AT ONE O'CLOCK P.M.

There will be offered for sale a number of males and females, in ages from calves to three-year-olds. This stock is all thoroughbred and guaranteed. There will be some very choice animals offered. Terms—25 per cent. down, balance three and six months, good paper. Wyton is situated on a branch of the Grand Trunk, between London and St. Marys. For further information address

W. B. SCATHERD, Sec'y, WYTON, ONTARIO. 279-a

BOYS FOR FARM HELP!

The managers of DR. BARNARDO'S HOMES desire to obtain good situations with farmers throughout the country for the boys they are sending out from time to time from their London Homes. There are at present nearly 3,000 children in these Homes, receiving an industrial training and education to fit them for positions of usefulness in life; and those who are sent to Canada will be selected with the utmost care, with a view to their moral and physical suitability for Canadian farm life. Farmers requiring such help are invited to apply to

MR. ALFRED B. OWEN, AGENT, DR. BARNARDO'S HOMES. 279-y 204 Farley Avenue, TORONTO.

AUCTION SALE

SHORTHORN CATTLE

WEDNESDAY, MARCH 27th.

I will sell on the Market Square, Woodstock, my entire herd of Shorthorn cattle—about 25 head of cows, helpers and young bulls. This herd has been bred with great care to preserve the milking qualities of the breed. About ten of them have been giving milk or suckling calves all winter and are very thin. This will be an excellent opportunity for farmers to procure first-class stock cheap. Terms of sale—Nine months' credit on approved joint notes.

STRICKLAND BROS., JOHN HART, Auctioneers. Proprietor. 278-b

ATTRACTIVE PUBLIC SALE OF HIGH-CLASS SHORTHORNS

THURSDAY, MARCH 28th, 1889, Commencing Promptly at 1.30 o'clock, at

MAPLE LODGE STOCK FARM,

One mile west of Lucan Crossing, on Grand Trunk (main line), and London Huron and Bruce railways, 28 miles west of Stratford, and 16 miles north of London.

At the above time and place, we will sell 17 Choice Shorthorns, richly bred; five of the number will be extra good Young Bulls; the balance, very superior young Cows and Helpers, chiefly sired by the magnificent bulls—Baron Constance 5th—1878—and Duke of Colonus—1883. A great many of them are of our best milking strains. And we claim first-class milking qualities for our herd, combined with those of the best feeders.

Morning and evening trains from east and west on G. T. R., and from north and south on L. H. & B. Ry., stops at Lucan Crossing, and the mail train from the east on G. T. R., arriving at 1 o'clock, will stop at the farm on day of sale to let passengers off.

Terms:—Nine months' credit on approved joint notes, or six per cent. per annum off for cash.

We will extend a hearty welcome to all who come, whether they buy or not. Send for Catalogue.

A. BROWN, JAS. S. SMITH, AVONTON, Auctioneer. MAPLE LODGE P.O., Ont. 279-a

GRAND'S REPOSITORY,



ADELAIDE ST., TORONTO.

LARGE, SPECIAL AUCTION SALE

MARCH 19, 20, 21, 22 and 23,

250 STREET CAR HORSES,

The Property of the Toronto Street Railway Co. This stock will work on the busses until the sleighing goes, when they will be taken off and placed in our hands for sale to the highest bidder. Parties attending may rely upon every lot being sold. Nothing will be withdrawn nor bought in. Manitoba men and farmers throughout Ontario should give this Sale Special Attention, as out of so large an offering there certainly will be found many good Mares and Geldings, requiring only short rest with little care to freshen them up and make very profitable investments upon the prices they will doubtless realize at auction. The last two days of this sale we shall sell about 100 Mares and Geldings of all classes, the property of farmers and others. Sale will commence each day promptly at 11 o'clock.

OUR GREAT ANNUAL SPRING SALE

400 HORSES

WILL TAKE PLACE THIS YEAR

APRIL 16, 17, 18, 19 and 20.

W. D. GRAND, Manager and Auctioneer. 279-a

MAIL CONTRACTS.

SEALED TENDERS, addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, 5th April, 1889, for the conveyance of Her Majesty's Mails, on two proposed Contracts for four years, 6 times per week each way, between Byron and London, and Delaware and London, from the 1st July, next.

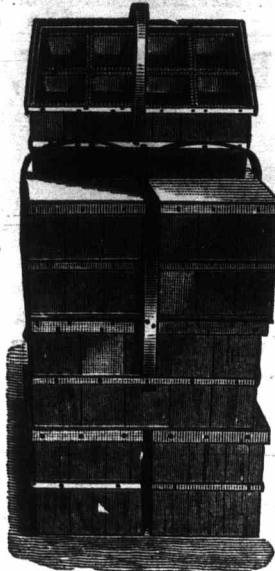
Printed notices containing further information as to condition of proposed contract may be seen and blank forms of Tenders may be obtained at the Post Offices of Byron, Delaware and London, and at this office.

R. W. BARKER, Post Office Inspector.
Post Office Inspector's Office,
London, 22nd Feb., 1889. 279-a

SENT ON TRIAL.

A Double Gang "ACME" Pulverizing Harrow, Clod Crusher and Leveler will be sent to any responsible farmer, and if it does not suit may be sent back at the expense of the manufacturer. No pay is asked until tried on his farm. Farmers should not, therefore, let dealers palm off on them a base imitation or inferior tool, under the assurance that it is better. See advertisement on page 91. 279-a

FRUIT GROWER AND ORCHARDIST



packages for every variety of fruit.

OAKVILLE BASKET FACTORY,

for Strawberry, Raspberry, Currant, Cherry, Huckleberry, Pear, Grape and Peach Baskets, Gardner's Plant Boxes, Farmer's Grain and Root Baskets, Clothes and Market Baskets of every description. The accompanying cut shows our 24x9 shipping basket especially adapted for Strawberries and Raspberries. Address:

W. B. CHISHOLM,
OAKVILLE, ONT. 279-d

TO THE DEAF.—A Person cured of Deafness and noises in the head of 23 years' standing by a simple remedy. Will send a description of it FREE to any person who applies to NICHOLSON, 177 McDougal Street, New York. 277-y

NORWAY SPRUCE in large quantities. Also, **Roses, Clematis, Climbers, Shrubs, Dahlias, Herbaceous Plants &c.** Send for price list. **A. GILCHRIST,** 279-c Toronto Junction, Ont.

SPRAY YOUR TREES. We make the cheapest and best Spraying Pumps in the market. Send for Illustrated Circular. **RUMSEY & CO., Ltd.,** 279-a SENECA FALLS, N. Y.

FARMERS! FARMERS!
JUST WHAT YOU WANT!

The GERRED INCUBATOR took Silver and Bronze Medal at Industrial. Send for Circular. **The GERRED INCUBATOR CO.,** 279-a 88 DeGrassi Street, TORONTO

THIRD ANNUAL CLYDESDALE SPRING STALLION SHOW
—WILL BE HELD IN THE—
Drill Shed, Toronto,
THURSDAY, 14th MARCH, 1889.

Large Premiums will be given. For Prize Lists and Railway Certificates apply to the Secretary, **WM. SMITH, M.D.,** President, **HENRY WADE,** 279-a COLUMBUS, TORONTO.

PORT PERRY GRINDING MILL.
WITH DOUBLE REDUCTION GRINDING DISC.



This mill drew the first premium for the Best Portable Grist Mill at the Pennsylvania State Fair held in Philadelphia from September 8th to 20th, 1884.

There were ten competing mills, made of iron, steel, and French burr stones, upon exhibition. It ground shelled grain, corn and cobs, both old and green, just husked, and brought in by visiting farmers who tested the mills to their satisfaction. Over twenty mills were sold during the Exhibition; also beat "The Best Mill on Earth" at Philadelphia, September, 1887.

PAXTON, TATE & COMPANY,
PORT PERRY, ONTARIO.

I have thoroughly tested the Grinder made by PAXTON, TATE & Co., Port Perry, and can heartily recommend it for the farmers' use. It will grind at slow speed, and is the only reliable horse-power or windmill grinder which I have tested. 279-c Yours, etc., JOHN DRYDEN, M. P. P., Brooklyn, Ont.

Agricultural Savings & Loan Company
ESTABLISHED 1872.

Total Assets,	\$1,585,808
Subscribed Capital,	630,000
Paid-up Capital,	616,585
Reserve Fund,	88,000
Deposits in Savings Branch,	580,465

Bankers, Bank of Toronto & Merchants' Bank. Liberal rate of interest allowed on savings deposits. Money to loan on real estate on favorable terms. For particulars apply to **WILLIAM A. LIPSEY, Manager,** 279-com-y 109 Dundas Street, London, Ont.

Imperial Pen and Pencil Stamp. Your name on this useful article for marking linen, books, cards, etc., 25c. Agents sample, 20c. Club of six, \$1.00. **EAGLE STAMP WORKS,** New Haven, Conn.

CARDS 60 samples and designs, Hidden-Name, Chromo, Gold Edge, and Shape Cards, 5 cents. **ROSE & CO.,** Mt. Vernon, N. Y. 279-f

BOOKS Scarce and Curious. The only place in the U.S. where you can get them. Circulars 2c. **J. G. STAUFFER,** Palmyra, Pa. 279-d

ADVERTISE IN THE ADVOCATE

FOR SALE.

A Farm of 160 Acres—thirty-five under cultivation, twenty acres summer fallow; ready for crop. A good house, and good stabling 15 x 75 feet. A fine place for stock. There will be a cheese factory in operation within three miles in the spring. Particulars on enquiry.

R. J. BENNER, 279-c PHEASANT FORKS, ASSA.

CHOICE 4 FARMS 4

—IN—
Manitoba and the Northwest
FOR SALE.

Apply to **JOHN WELD, London, Ont.** 268-1f

Address for Price List and description, **P. K. DEDERICK & CO., ALBANY, N. Y.** BALES HAY without Tramping or Stopping.



THE P. K. DEDERICK PERPETUAL HAY PRESS
MANUFACTORY AT 90 COLLEGE ST., MONTREAL, P.Q. 269-y

W. & F. P. CURRIE & CO.

100 Grey Nun St., Montreal,
MANUFACTURERS OF

SOFA, CHAIR AND BED SPRINGS.
A LARGE STOCK ALWAYS ON HAND.

IMPORTERS OF
Drain Pipes, Vent Linings, Fine Covers, Fire Bricks, Fire Clay, Portland Cement, Roman Cement, Water Lime, Plaster of Paris, Borax, Whiting, China, Clay, etc. 265-y

VICK'S AMERICAN BANNER OAT.

This oat was introduced by Jas. Vick, Seedsman, Rochester, N. Y., in 1886. He says that he had tried it three years previously from an original stock of about one pint, and was satisfied both as to its distinctiveness from other varieties and also as to its productiveness. These oats are the most productive grown. In the year 1886 I sowed one pound, two thousand bushels. The grain is white, large and plump; ripens early; has a stiff straw of good strength, and has an open or branching head. It tillers freely, so can be sown thinner than is customary. These oats are free from all foul seeds and are perfectly pure.

Price, by express or freight at expense of purchaser, per bushel, \$1.25, or 2 1/2 bushels, including bag, for \$3. A liberal reduction for larger quantities. Orders received by mail will be promptly attended to. Address—

JOHN MILLER, Markham, Ont.

TESTIMONIALS.
Sutton West, Dec. 1, 1888.—From the two bushels American Banner Oats I received from you last spring I grew 105 bushels. I am well pleased and intend to sow them all next season.—JNO. L. HOWARD.

A. FORSTER, Reeve of Markham, received one bushel of these oats last spring and says he has about fifty (50) bushels, but has not measured them yet. 278-b

DRS. ANDERSON AND BATES—Eye and Ear Surgeons, 34 James Street, Hamilton, Ont. Exclusive attention given to the treatment of the various diseases of the EYE and EAR. 268-y

CROSS EYES STRAIGHTENED

J. H. TENNENT,
VETERINARY SURGEON
LONDON, ONT.

CANADA BUSINESS COLLEGE

HAMILTON, ONT.
TWENTY-SEVENTH YEAR.
BEST equipped and most successful Business College in the Dominion. Over 300 students past year. Offers unequalled advantages to farmers' sons and others desiring a business education. For handsome illustrated catalogue write.

271-y R. E. GALLAGHER, Principal.

BRITISH AMERICAN BUSINESS COLLEGE

ARCADÉ
YONGE ST. TORONTO
WILL RE-OPEN MONDAY, SEPT. 3, 1888.
For circular, etc., address C. O'DEA, Secretary.
271-y

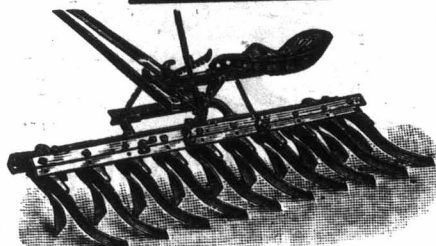
PROOF THE MANAGERS OF THE St. CATHARINE'S BUSINESS COLLEGE

Will give \$100 to any charitable institution, named by any person or rival college, who can furnish the name of a student who has taken a full course in Shorthand at this College, and who has failed to secure a position; or for any student who has taken a full course in any department, and who has lost his position through incompetency.

W. H. ANGER, B. A.,
PRINCIPAL.
N.B.—The best costs no more than the poorest.
274-y

HOME STUDY—Thorough and practical instruction given by MAIL in Book-keeping, Business Forms, Arithmetic, Penmanship, Shorthand, etc. Low rates. Distance no objection. Circulars free. BRYANT & STRATTON'S, 419 Main St., Buffalo, N. Y.
275-f

150,000 FARMERS HAVE USED AND APPROVED THE "ACME"



PULVERIZING HARROW, CLOD CRUSHER AND LEVELER.
Steel Crusher and Leveler. Double Gangs of Adjustable Reversible Coulters. Lumps Crushed, Soil Cut, Lifted and Turned in one operation. No Spike or Spring Teeth to pull up Rubbish. No Wearing Journals. Practically Indestructible. Sizes 8 to 12 ft. With and Without Sulky.

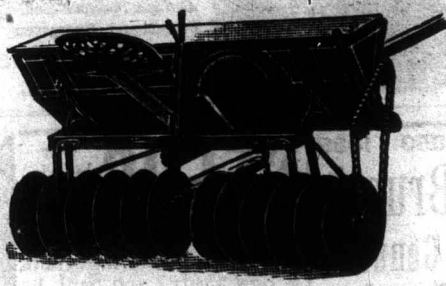
I Deliver Free at Convenient Distributing Depots in Canada.

FAIR PLAY. Don't Buy a Base Imitation or Inferior Tool. Order a Genuine Double Gang Acme ON TRIAL, to be returned at my expense if not satisfactory. No Pay Asked in Advance. Agents Wanted. Illustrated Pamphlet FREE.

DUANE H. NASH, Sole Manufacturer,
Millington, New Jersey.
Mention this paper. 277-c

OVERSEERS WANTED Every where, at home or to travel. A reliable person in each County to take up advertisements and show cards of Electric Goods on trees, fences and shrubs, in conspicuous places in towns and country, in all parts of the United States and Canada. Steady employment; wages, \$2.50 per day; expenses advanced; no talking required. Local work all or part of time. No situation paid in postal cards. ADDRESS: WITNEY STAMP, J. C. EMORY & CO., 6th & Vine Sts., Cincinnati, O.

THE "CORBIN," THE LEADING DISK HARROW



The above shows the Harrow with Removable Seeder.

Still They Come. More than forty trials are reported with other Disk Harrows, in which the "Corbin" was sold and settled for, the past two seasons.

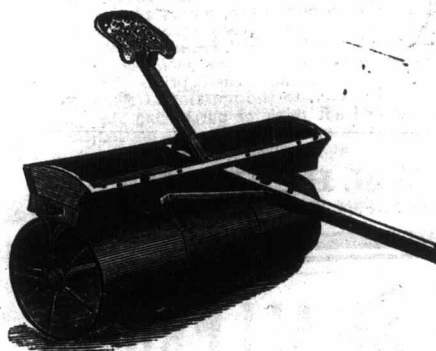
The simple fact of the matter is that the "Corbin" is the strongest, the most flexible, the most durable, the lightest draught, and the only Disk Harrow that is reversible, and cultivates all the land under the tongue, and leaves the land level, and its work in the field quickly proves it.

The "Corbin" is made by men who have made a specialty of the Disk Harrows for years, and they know what is necessary in a perfectly working Disk Harrow. In this respect they have a great advantage over inexperienced manufacturers.

Send for 1888 circular which has some interesting facts and description of a new harrow.

Mr. Thos. Shaw, writes in Live Stock Journal of March '88: "The reason this firm (St. Lawrence Manufacturing Co.) has done so well, is because they have manufactured a good article, the usefulness of which we have verified on our own farm. About the Seeder. This has now a perfected drive gear, and gave excellent satisfaction last season. As it greatly adds to the utility of the Harrow at a small cost, the demand for it is rapidly increasing."

THE CORBIN STEEL DRUM ROLLER, WITH GRASS SEEDER.



—ADDRESS—

The St. Lawrence Mfg. Co. of Ont., Ltd.
PRESCOTT, CANADA.

Agencies—Messrs. Van Allen & Agur, Winnipeg, Man.; all agents of the Massey Mfg. Co. in the North-west, and 200 local agents in Ontario. 278

GRATEFUL—COMFORTING

EPPS'S COCOA BREAKFAST.

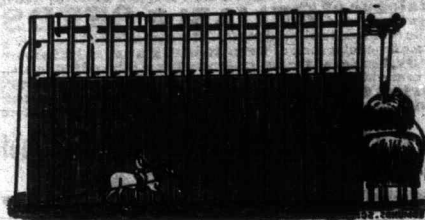
"By a thorough knowledge of the natural laws which govern the operations of digestion and nutrition, and by a careful application of the fine properties of well-selected Cocoa, Mr. Epps has provided our breakfast tables with a delicately flavored beverage which may save us many heavy doctors' bills. It is by the judicious use of such articles of diet that a constitution may be gradually built up until strong enough to resist every tendency to disease. Hundreds of subtle maladies are floating around us ready to attack wherever there is a weak point. We may escape many a fatal shew by keeping ourselves well fortified with pure blood and a properly nourished frame."—Civil Service Gazette.
Made simply with boiling water or milk. Sold only in packages by Grocers, labelled thus:
JAMES EPPS & CO., Homoeopathic Chemists,
278-y London, England.

THE DORCAS MAGAZINE

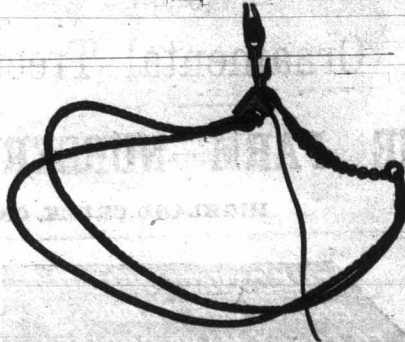
is full of useful information on Woman's Handwork: Knitting, Crochet-work, Embroidery, Art Needlework, and other household topics of practical character. Every lady should subscribe for it. Price, 50c. a Year. Address The Dorcas Magazine, 19 Park Place, New York. 276-f

BUCHANAN'S Malleable Improved Pitching Machine

For unloading hay and all kinds of loose grain



Will unload on either side of barn floor without changing car. No climbing necessary in order to change from one mow to another. Will unload a load of hay in four fork fulls. All cars made of malleable iron. All forks made of steel. Machines guaranteed to give satisfaction or no sale. The purchaser to be the judge. Responsible agents wanted in all unoccupied territory. None but responsible men need apply. Send for circulars and terms.



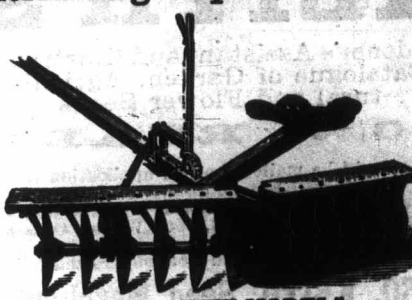
THE COMMON-SENSE SHEAF LIFTER

Works in connection with the hay carrier, and is the most complete apparatus ever offered to the public for unloading sheaves. Leaves the sheaves in the mow just as they come from the load. Satisfaction guaranteed. Price, \$5.00.

M. T. BUCHANAN,
INGERSOLL. 278-a

1889. ESTABLISHED 1838. 1889

Morrisburg Implement Works.



THE "NEW MODEL" Rotary Disc Jointed Pulverizing Harrow

With or Without Seeder Attachment.

Don't buy until you have given the "New Model" a trial. Progressive farmers say that it is the very best farm implement ever produced, because effective in work, durable in wear, simple in construction, convenient in handling. See one, try one, buy one and be happy; it will pay you to do so. Send for catalogue showing "New Model" with Seeder Attachment.

J. F. MILLAR & SON,
MORRISBURG, ONT.

Write for testimonials of leading farmers of Canada and descriptive circular.
The "New Model" is for sale by Messrs. E. G. Prior & Co., Victoria, B. C.; The Watson Mfg. Co. (Ltd.), Winnipeg, Man.; R. J. Latimer, 92 McGill St., Montreal, Que.; G. A. Le Baron, Sherbrooke, Que.; Johnston & Co., Fredericton, N. B.; W. S. Casson (Mgr. for Frost & Wood), Truro, N. S.; John West, Kensington, P. E. I., and by agents in every county in Ontario.
Distributing warehouse for Western Canada at London, Ont., H. A. STRINGER, Agent.

SEEDS

Our Annual **DESCRIPTIVE** and **Illustrated Catalogue of RELIABLE SEEDS** is now ready and will be sent free to all applicants. It contains all the leading and most popular sorts of **Vegetable, Farm and Flower Seeds**, besides all the desirable novelties of this and last season, and everything else in our line of business. **Every Farmer, Market Gardener, Florist, Private Gardener and Amateur**, should see a copy of our Catalogue before ordering. It will pay you.

J. A. SIMMERS 147 KING Street
(Three doors West of the Market)
TORONTO, ONTARIO

HENRY WESTNEY

Importer, Grower, and Dealer in

Choice Fruit

—AND—

Ornamental Trees.

THE FARM NURSERY

HIGHLAND CREEK, ONT.

THE CANADIAN MAIL
BRINGS OUR SEEDS
TO EVERY MAN'S DOOR.

JOHN S. PEARCE & CO
SEED MERCHANTS
LONDON ONT.
64 PAGE CATALOGUE FREE.
SEND FOR ONE.

ESTABLISHED 1866.

KEITH'S

Gardener's Assistant and Illustrated Catalogue of Garden, Agricultural and Flower Seeds

NOW READY

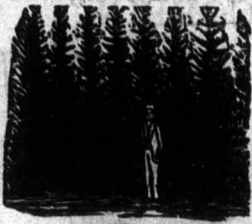
and will be mailed free on application to any address.
Clover and Timothy, Orchard, Blue and Red Top Grasses, Flax Seed, Tares, Seed Wheat, Oats and Barley, &c., &c.
Correspondence solicited from buyers and sellers.

GEO. KEITH, Seed Merchant,
124 King-St. East, Toronto.



Every kind of hardy Fruit and Ornamental Tree or Plant at almost half the price of many others. Lovett's Guide to Horticulture tells all about them (defects and merits, prices, planting, culture, pruning, etc.) It is a handsome book of nearly 100 pages, finely printed, over 200 engravings. Mailed with colored plates, 10 cents; without plates free. Headquarters for Wonderful Peach, Gandy and Monmouth Strawberries, Abundance and Spaulding Plums, Meech's Quince, etc.

Plants by mail a specialty.
J. T. LOVETT CO., Little Silver, N. J.
Mention paper and get copy Orchard & Garden tree.



FOREST TREES.

Catalpa Speciosa,
White Ash, European
Larch, Pine, Spruces,
Arbor Vitae, etc., etc.
Catalpa Speciosa Seed,
Forest and Evergreen
Seeds.
R. DOUGLAS & SON,
Waukegan, Ill.

1850 - 1889

Bruce's Genuine Garden Field Seeds

SEEDS

Our descriptive and priced Catalogue for spring trade is now ready, and will be mailed free to all applicants, and to customers of last year without solicitation. **Market Gardeners** will find it to their advantage to sow our Seeds.

JNO. A. BRUCE & CO.
Hamilton, Ont.

If you want the best Garden you have ever had, you must sow

MAULE'S SEEDS.

There is no question but that Maule's Garden Seeds are unsurpassed. Their present popularity in every county in the United States proves it, for I now have customers at more than 31,000 post-offices. **When once sown, others are not wanted at any price.** My new catalogue for 1889 is pronounced the most original, beautifully illustrated and readable Seed Catalogue ever published. It contains among other things, cash prizes for premium vegetables, etc., to the amount of \$3,500. You should not think of purchasing any seeds this Spring before sending for it. It is mailed free to all enclosing stamp for return postage. Address

WM. HENRY MAULE,
1711 Filbert St. PHILADELPHIA, PA.

SMALL FRUITS AND GRAPE VINES.

PLANTS GENUINE AND WELL ROOTED.
A CHOICE ASSORTMENT.
CATALOGUE FREE.

T. C. ROBINSON
OWEN SOUND, ONT.

OVER 6,000,000 people believe that it pays best to buy Seeds of the largest and most reliable house, and they use

Ferry's Seeds

D. M. FERRY & CO. are acknowledged to be the **Largest Seedsmen in the world.** D. M. FERRY & CO.'s Illustrated, Descriptive and Priced **SEED ANNUAL** For 1889 will be mailed FREE to all applicants, and to last year's customers without ordering it. **Invalids to all.** Every person using Garden Field or Flower Seeds should send for it. Address **D. M. FERRY & CO., Windsor, Ont.**

SEEDS GIVEN AWAY. 100 kinds Mixed Flower Seeds, 500 kinds, Guide, and 10c. Certificate for Every flower lover delighted. Tell all your friends. **G. W. PARK, FANNETTSBURG, PA.** Be prompt. This offer will appear but once more.

A NURSERY AT YOUR DOOR.

TREES, VINES AND PLANTS. Just the kinds wanted. Strictly first-class. **SPECIALTIES: Globe Seedling Peach, Russian Apricot, Eaton, Vergennes and Worden Grapes, Jessie Strawberry, and other New and Old Sorts.** Send your order to the **CENTRAL** for prices. The Mailing Department receives Special Attention. **A. G. HULL,** Central Nursery, Catalogues free. **ST. CATHARINES, ONT.**

MILLIONS OF TREES

For Forest and Ornamental planting Mailed Free to any Post Office in Canada at the rates advertised in my spring catalogue. Box Elder Seedlings, one year-old, \$1 per 1000; Sugar Maple Seedlings, one year-old, \$1 per 1000; Box Elder Seed, 35 cts per lb. Price list of over 100 distinct species sent free to all who apply.

W. W. JOHNSON,
SNOWFLAKE,
ANTRIM CO., MICH

BUY SELECT SEEDS OF VEGETABLES AND FLOWERS.

HOUSE PLANTS and ORNAMENTALS
CATALOGUE FREE.

T. C. ROBINSON,
OWEN SOUND, ONT

SEEDS WM. EWING & CO.,

142 McGill St., Montreal,
SEED - MERCHANTS.
GARDEN AND FARM SEEDS
of every description. Our Illustrated Catalogue mailed free to all applicants.
CHOICE LOWER CANADIAN GROWN TIMOTHY A SPECIALTY.
Send for sample and compare with western grown
CLOVERS, GRASSES AND SEED GRAIN.



Steele Bros. Co's SEEDS

Buy them! Try them! Prove them!
Their handsome Illustrated Catalogue, with a beautiful lithographed page of flowers, mailed FREE to all intending purchasers on application by post card. **Send for it to-day; IT WILL PAY YOU.** Tells all about new varieties of Seeds, Bulbs, Vines, Roses, &c., and how to grow them.
Address The STEELE BROS. Co. Ltd. TORONTO

WILLIAM EVANS,

Seedsman to the Council of Agriculture for the Province of Quebec, Importer and Grower of

Field, Garden and Flower Seeds
WAREHOUSES: Nos. 89, 91 & 93 MCGILL-ST.,
Nos. 104, 106 & 108 Foundling-St., Montreal.

NURSERIES & SEED FARM: BROADLANDS, COTE ST. PAUL
Fruit and Ornamental Trees, Shrubs, Roses, Greenhouse and Bedding Plants, Vegetable Plants, Small Fruits, &c. Catalogues mailed free on application.

STOCK FOR SALE.



200 Percheron -AND- FRENCH COACH HORSES. Send for Catalogue. J. W. AKIN, SCIPIO, N. Y. 279-b

COLDSTREAM STOCK FARM, WHITBY, ONTARIO.



We have on hand and for sale a superior lot of imported and home bred Clydesdale Stallions and mares. Several of them were prize winners at the leading shows in Scotland and Canada. Also a few choice Shetlands. Prices to suit the times. Address, JEFFREY BROS., Whitby, Ont. 279-y

THE LOWLANDS STUD!

CLYDESDALES FOR SALE AT REASONABLE TERMS.



Our importations of 1888 comprises a large number of carefully selected stallions and mares, gets of the noted sires, Darmsley (232), Macgregor (1487), St Lawrence (3220), Lord Hopton (2965), Sir Hildebrand (4024), and Old Times (579). Visitors always welcome. Catalogues on application.

DUNDAS & GRANDY, SPRINGVILLE P. O. Cavanville Station on the C. P. R. 278-y

D. & O. SORBY, GUELPH, ONT.

Breeders and Importers of

FASHIONABLY BRED CLYDESDALES



We always have on hand a large number of imported and home-bred Clydesdales (male and female) of good breeding and quality, which we will sell at honest prices. Our specialties are good and well bred horses and square dealing. Come and see us or write for particulars.

277-y



OVER 150 TYPICAL PERCHERONS AND JERSEYS.

For CATALOGUE and Prices, address E. W. COTTRELL, No. 4 Merrill Block, DETROIT, Mich.

WILSON HORSFALL,

Potto Grange, Potto Station, Northallerton, Yorkshire, England. Breeder of registered

CLEVELAND BAY HORSES.

Largest Stud in Cleveland. Also, prize

BORDER LEICESTER SHEEP.

Telegrams, Horsfall, Hutton Rudby. 279-c

TO HORSE BREEDERS.



IMPORTED SHIRE-BRED STALLIONS

-AND-

BROOD MARES FOR SALE.

Prize-winners at the Industrial and International Exhibitions; also a number of High-bred Travelling Fillies; mostly sired by General Stanton. Address MORRIS, STONE & WELLINGTON, WELLAND, - - ONTARIO. 279-b

FOR SALE.

SEVEN SHORTHORN BULLS

(Bates blood), from seven to eighteen months old; sired by either 5th Duke of Holker (Imported) = 1242 = (44687), or the Duke of Salisbury (Imported) = 9280 = (58780). Excellent animals, and chiefly red.

Apply to JOHN IDINGTON, STRATFORD, ONT. 278-b

Advertisement for Ohio Improved Chesters, featuring a pig illustration and text: 'WARRANTED CHOLERA PROOF. EXPRESS PREPAID. WINE 1ST PRIZES IN U. S. & FOREIGN COUNTRIES. 2 WEIGHED 2806 LBS. SEND FOR DESCRIPTION & PRICE OF THESE FAMOUS HOSES, ALSO FOWLS. L. B. SILVER CO., CLEVELAND, O. (This company sold 1025 head for breeding purposes in 1888. Send for facts and mention this paper.)'

E. D. GEORGE

PUTNAM, - - ONT.

Importers and Breeders of Improved Chester White Swine

Stock recorded in the National C. W. Record. Orders booked for spring pigs, in pairs and trios not akln. Prices right. 279-c

SHROPSHIRE BREEDERS, ATTENTION!

It will be to the interest of all Shropshire Breeders to observe the Rules of Limitation, as adopted by the American Shropshire Registry Association, at their Annual Meeting, Nov., 1888, and make the application at once to have their flocks recorded. Said Rules are as follows: 5. Imported sheep. All sheep imported before July 1st, 1888, must be recorded before April 1st, 1889, and those imported after July 1st, 1888, must be entered for registration within one year after they arrive in America or they will be ineligible for registration in the Record.

10. All American bred sheep, born after January 1st, 1889, to be acceptable for registration, must be recorded within one year after birth. When asking for information or blanks, which are furnished free, enclose postage stamp. Address MORTIMER LEVERING, Secretary, LA FAYETTE, - - IND. 279-a

Two AYRSHIRE BULLS for Sale,

Registered in Canada Herd Book. 278-tf MICHAEL BALLANTYNE, St. Mary's P.O.

FOR SALE - A HOLSTEIN BULL three years old. For particulars apply to the undersigned, JOS. S. CRESSMAN, BRISLAU, P. O. 278-tf

JOHN FENNEL, BEELIN, - - ONT.

Breeder of Jersey stock, registered in the A. J. C. C. H. R. 278-b

FOR SALE.

Six choice young Shorthorn bulls, and a lot of Berkshire pigs; very, very cheap. Correspondence invited. 278-c EDWARD JEFFS, Bond Head.

COTSWOLDS AND SHORTHORNS FOR SALE



For many years my flock has been the largest and best in Ontario County. A number of sheep and cattle always on hand for sale. Come and see me, or write for particulars. JOSEPH WARD, MARSH HILL, ONTARIO. 279-y

Prize Winning Ayrshires for Sale.



One is one of the largest and most successful show herds in Canada. They are finely bred and of great individual merit. Bulls, heifers and cows always on hand for sale; also a few good Leicester sheep. Correspondence solicited. Visitors welcome. Address THOS. GUY, Sydenham Farm, Oshawa, Ont. 279-y

BERKSHIRES

J. G. SNELL & BRO. EDMONTON P. O.

Brampton and Edmonton Railroad Stations. For forty years we have led all others in these lines, both in the show yards and breeding pens. We now have a choice lot of young pigs varying in age, from six weeks to six months, all are descended from fashionably bred prize winning English stock. We also have a grand lot of Cotswolds; a large number of which are yearlings. Good stock always for sale. Visitors welcome. Write for particulars. 279-y

SHORTHORNS

COTSWOLDS FOR SALE.

My Shorthorns are well bred, good colors, and have been fine milkers for generations. I have over 100 females and a large number of bulls, from which buyers may select. Prices to suit the times. Satisfaction guaranteed. Correspondence promptly answered. Visitors welcome.

JAMES GRAHAM, PORT PERRY, ONT. 279-y

BOW PARK HERD

—OF—
PURE-BRED SHORTHORNS.

Have at all times a number of both sexes for sale. Catalogue of young bulls recently issued. Address:

JOHN HOPE, Manager,
266-y Bow Park, Brantford, Ont.

FRANK R. SHORE & BROS.

White Oak, Ont.
Breeder of
SCOTCH SHORTHORNS
—AND—
SHROPSHIRE.



Young bulls and heifers for sale from imported Cruickshank sires and from dams of the most approved Scotch breeding. 278-y

CHOICE YOUNG HOLSTEIN BULLS

—AT—
OAKDALE STOCK FARM.
The bull calves from Oakdale Farm took first, second and third prizes at Toronto Industrial Exhibition, and again first at London. The young bull Banker taking also the silver medal for best bull of any age. The Oakdale herd of Holsteins won in '87 and '88 more money prizes, medals and diplomas than were ever won at same number of exhibitions by any herd in the Dominion. Address

Or to **JOHN LEYS, JOHN DUNN,**
278-b Toronto, Ont. Foreman Oakdale Farm, PICKERING, P. O.



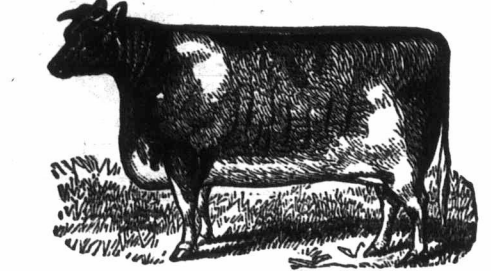
SHORTHORN BULLS

The undersigned has Four Young Bulls which are model animals, and intending purchasers will find them as represented.

Correspondence promptly answered.

JOHN MILLER,
Breeder,
Markham P. O., Ont.
277-c

ARTHUR JOHNSTON,
Greenwood, Ontario.



A LARGE SELECTION OF HOME-BRED
SHORTHORN BULLS FOR SALE.

All by imported sires, and mostly out of imported dams, besides imported and home bred cows and heifers. I have also a number of exceedingly good imported

CLYDESDALE STALLIONS AND MARES FOR SALE.

New Catalogue for 1889, will be ready about the 20th January, 1889. Send for one.

Claremont Station, C. P. R., or Pickering Station, G. T. R. Parties met at either station on shortest notice. Come and see them. 285-1f

Imported Clydesdales & Hackney Stallions for Sale

Highest Prize Winners in the Leading Shows of the World

AND GETS OF FAMOUS SIRES

Such as Lord Erskine, Darnley, Old Times, McCammon, Garnet Cross Macgregor, Prince Edward, Prince Henry, Sir Wyndham, Good Hope and Fireaway.

Prices Reasonable. Catalogues Furnished on Application.



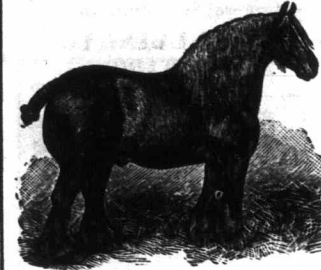
ROBT. BEITH & CO.,
BOWMANVILLE, ONT.

Bowmanville is on the line of the G. T. R., 40 miles east of Toronto and 294 west of Montreal. 278-y

IMPORTANT AUCTION SALE

—OF—
LIVE STOCK, IMPLEMENTS, ETC.

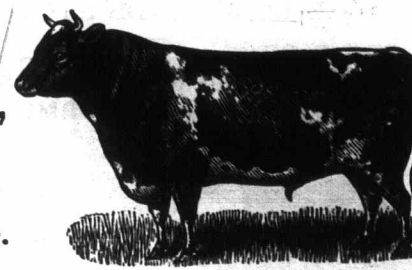
—ON—
WEDNESDAY, 3rd APRIL,



—AT—
LOGAN'S FARM,

PAPINEAU ROAD,

MONTREAL.



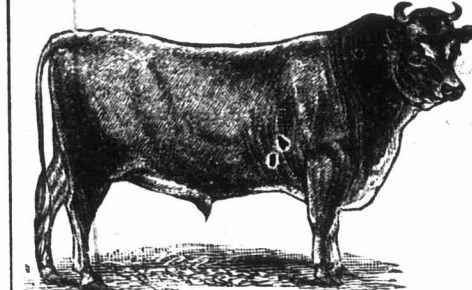
Thirty head of pure bred Ayrshires, all entered in herd book; three pure bred Ayrshire bulls, fit for service; one first prize Clydesdale filly, three years old; one first prize Clydesdale stallion, two years this spring; one one-year-old Clydesdale filly; two Harry H. trotting horses, one horse and one mare, three and four years old; lot of pure bred Leicester sheep in lamb, and a variety of farm implements and dairy utensils. Owner's reason for selling, on account of the farm being taken into the city, thereby making the taxes too high to breed horses and cattle. Sale at 10 o'clock, commencing with implements, the cattle and horses to be sold after lunch.

THOS. IRVING.

EXTENSIVE AUCTION SALE

—OF—
JERSEY STOCK

—ON—
Wednesday, 3rd April, A. D. 1889, at 10 o'Clock A. M.



The subscribers will offer for sale by public auction on the premises, at OAKLANDS FARM, near WATER-DOWN STATION (G. T. R., Toronto branch), the whole of the stock belonging to the ESTATE OF VALANCEY E. and H. H. FULLER, consisting of Jersey cows, bulls, heifers and young bulls, WITHOUT RESERVE. All trains will stop at Waterdown Station on that day, and conveyances will be

furnished to the farm. Full particulars and catalogues of sale will be sent post free on application to Walter Anderson, Victoria Hall, 35 King Street East, Hamilton, Ont.

WALTER ANDERSON, } Assignees,
W. W. ROSS, }
Estate of Valancey E. and H. H. Fuller.



IMPORTED AND REGISTERED
CLYDESDALE & HACKNEY

STALLIONS AND MARES

Constantly on hand, and For Sale at Reasonable Terms.

The importations of 1888 comprise a large number of one, two, three and four-year-old registered stallions and mares, the gets of such sires as Macgregor (1487), Darnley (222), and Prince of Wales (673). Also a few choice **SHETLAND PONIES**. Correspondence solicited, and visitors always welcome.

GRAHAM BROTHERS,
Twenty-five miles east of Toronto. CLAREMONT, ONT.

MANY OLD FARMS require so much fertilizing that farms & gardens **WONT PRODUCE A PROFIT**. The rich, loamy soil of Michigan Farms produces a fine crop without this expense. The near Markets, general healthfulness of climate and freedom from cyclones, blizzards, together with good society, Churches, etc., make Michigan Farms the best in the world. Write to me and I will tell you how to get the best farms on long time; low rate of interest. O. M. BARNES, Land Commissioner, Lansing, Mich.

BAIN WAGON CO.'S

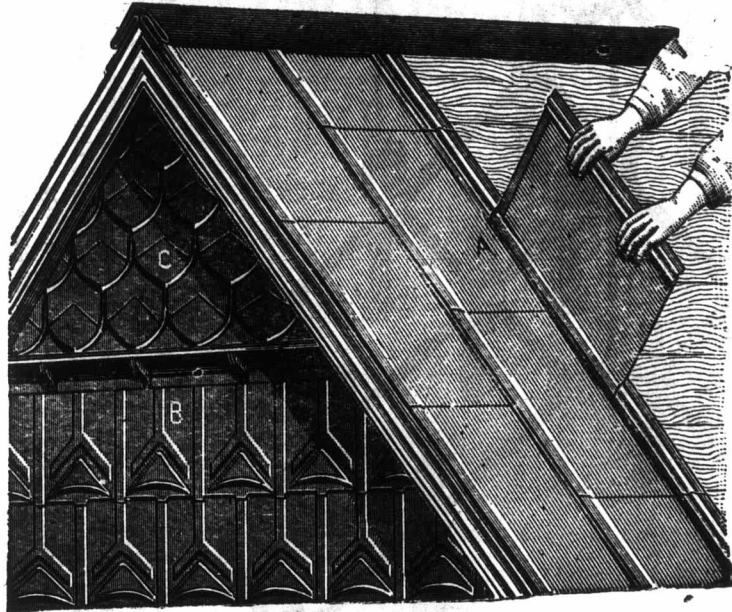
Farm Truck



THIS cut represents the most convenient Wagon ever put on a farm, because it is suitable for all kinds of work, and always ready, no changes being necessary. THIS WAGON was invented and first introduced in Michigan, U. S., and is now very extensively used by leading farmers in the United States. AND EVERY WAGON made and sold by us in Canada is giving entire satisfaction. For further particulars and prices. Address **BAIN WAGON CO., Woodstock, Ont.**

Broad Rib Sheet Steel Roofing

The Cheapest and Best Metal Roofing and Siding in the Market. Can be Laid as Cheap as a Shingle Roof. Specially Designed for Factories, Mills, Elevators, Etc. ANYONE CAN PUT IT ON.



We have recently perfected machinery for manufacturing **Plain Sheet Metal Roofing** under the Walter's patent. This patent possesses advantages of construction not found in any other Metal Roofing. Its use does away with the necessity of

TONGUING UP EDGES,
DOUBLE-SEAMING,
COPING OF RIBS,
RIVETING OF RIBS,
EXPOSED FASTENINGS
AND CLEATS

No expense will be spared to make **THIS ROOFING**, in quality of metal and perfection in fitting, the very best in America.

A. Cooper's Broad Rib Roofing. B. Walter's Patent Standard Shingles.
C. Cooper's Patent Queen Anne Shingles.
For prices apply to the sole manufacturers in Canada.

T. McDONALD & CO.,
69 to 75 Sherbourne St., TORONTO, ONT

HILLHURST HERDS

ABERDEEN, ANGUS, HEREFORD,

A. J. C. C. JERSEY CATTLE.

Choice Young Bulls and Heifers of the above breeds for sale at moderate prices at all times. A few fine, young Hereford Bulls, by Cassio, at low prices if taken at once.

M. H. COCHRANE,

HILLHURST P. O., Compton Co., Q.

IF YOU WANT TO PRODUCE

CHEAPER BEEF

AND MORE OF IT, BUY A

CRUICKSHANK BULL

FROM

JOHN DRYDEN,

BROOKLIN, ONT.

Thick, Fleshy, Stylish Fellows, full of vigor and at very moderate prices.

MAPLE LANE HERD OF JERSEYS FOR SALE.

- 1.—King Hugo of St. Anne's (16960), three years old, pure St. Lambert.
- 2.—Clover Smith (22622). She is a pure Rex cow out of Governor Lorn and Lady Lorn.
- 3.—Violet of Glen Rouge (20755), a grand-daughter of Stoke's Pogie 3rd, and is due to calve April 1st.
- 4.—St. Lambert's Beauty (41060), a pure St. Lambert.
- 5.—Daisy of Maple Lane (44546), just dropped a beautiful heifer calf.
- 6.—Darling of Maple Lane (52582), 50 per cent. St. Lambert, and due to calve March 1st.
- 7.—Flower of Maple Lane (52581), 25 per cent. St. Lambert, and due to calve March 1st.
- 8.—Lady Hugo of Maple Lane (52583), 75 per cent. St. Lambert, and due to calve 24th May.
- 9.—Mary Ann of Maple Lane (52584), 75 per cent. St. Lambert, heifer, one year old.

And a few young calves. These cattle have been my choice selections for the last six years to get the best milk and butter cows. These cattle are not culls, they are my entire herd, and have been shown at all the leading shows and all prize animals, and they must be sold as I am going to retire from farming this spring. Anyone wanting information about any of these cattle by writing to me it will be given, but much rather intending buyers would call and see them as I know they will speak for themselves.

SAMUEL SMOKE,
CANNING, ONT.

DOUGLAS H. GRAND, AUCTIONEER.

Pedigree Live Stock a specialty. Sales held any part of the country. Terms reasonable. 150 Dundas St., London.

FOR SALE

THAT VALUABLE FARM AT CHARLESBOURG,

On the macadamized road, about three miles from the City of Quebec, belonging to the estate of the late James Clearhue, containing one hundred and eighty-five (185) acres, more or less, with a large two-story Stone House, Stables, Barns, etc., etc. For particulars apply to

THOS. CLEARHUE, or to **WM. SIMONS,**
P. O. Box 176. No. 48 St. Nicholas St
276-c BROCKVILLE, Ont. QUEBEC, P.Q.

ANY PERSON CAN PLAY THE PIANO AND ORGAN WITHOUT A TEACHER, by using Soper's Instantaneous Guide to the Keys. Price, \$1. No previous knowledge of music whatever required. Send for book of testimonials free. Address **The Dorcas Magazine, 19 Park Place, New York.**

\$1,500.00

— WORTH OF —

STOCK, IMPLEMENTS, ETC

GIVEN AWAY!

For Procuring New Subscribers to the FARMER'S ADVOCATE.

CONDITIONS:

- 1st. Cash must accompany all lists of names.
- 2nd. In all cases to secure these prizes the names sent in must be new subscribers. *Renewals will not count.*
- 3rd. Competitors may send in their lists weekly if they so desire. The party who first sends in the full number of names will secure the prize.
- 4th. A Cash Commission will be allowed to all who are not prize winners: From 10 to 20 names, 25cts. each; 20 to 50 names, 35cts. each; 50 to 100 names, 45cts. each; 100 to 200 names, 50cts. each.

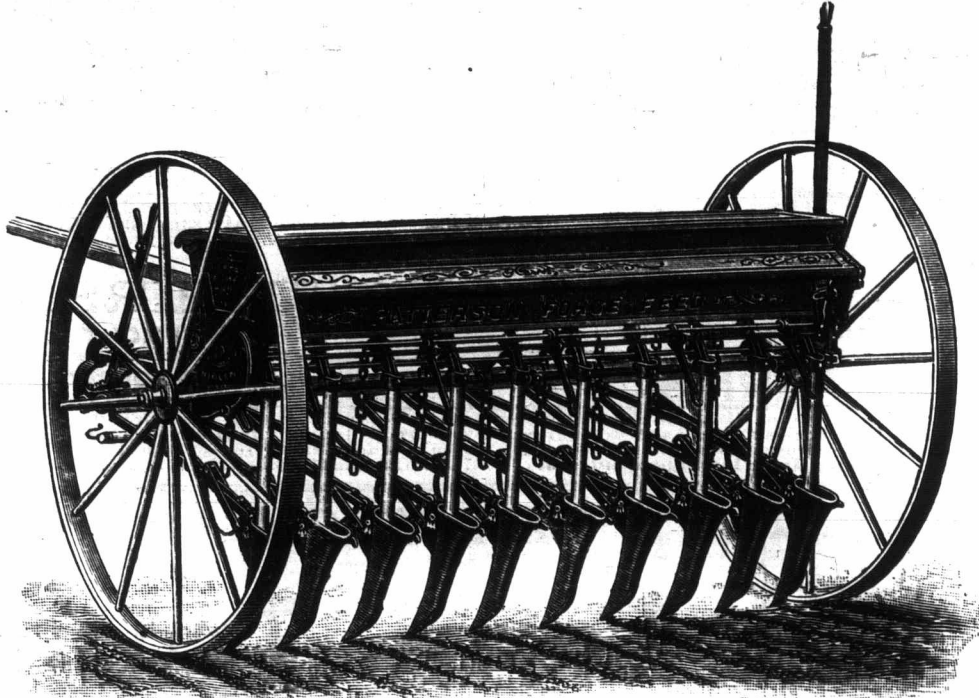
STOCK.

- For 150 new names we will give a Hereford Bull (fit for service), valued at \$150, bred by R. J. Mackie, Oshawa.
 - For 150 new names, a Shorthorn Bull (fit for service), bred by James Graham, Port Perry, Ont.
 - For 150 new names, an Ayrshire Bull (fit for service), bred by Thomas Guy, Oshawa, Ont.
 - A Heifer of any of the above breeds will be given for from 100 to 150 names, according to quality of animal.
 - For 30 new names, a Shropshire Ram or Ewe Lamb, bred by John Miller & Sons, Brougham, Ont., or Jno. Dryden, M. P. P., Brooklin, Ont.
 - For 30 new names we will give a Cotswold Ram or Ewe Lamb, bred by Joseph Ward, Marsh Hill Ont., or David Birrell, Greenwood, Ont.
 - For 20 new names will give a Leicester Ram or Ewe Lamb, bred by Jeffrey Bros., Whitby, Ont.
 - For 20 new names we will give a Dorset Horned Ram Lamb, bred by Capt. Wm. Rolph, Markham, Ont.
 - For 30 new names we will give a Hampshire Ram Lamb, bred by John Adams, Esq., Port Perry.
 - For 40 new names we will give a Berkshire Sow or Boar 6 months old, bred by J. C. Snell, Edmonton, or J. G. Snell & Bro., Edmonton, Ont., or by Wm. Linton, Aurora, Ont.
 - For 10 new names we will give a pair, or for 5 a single bird, of any of the following breeds: Light Brahmas, Dark Brahmas, Langshans, Black Red Games, any variety of Leghorns, Wyandottes, Dorkings, Spanish, Bantams, Ducks, etc. Eggs will be given as prizes when desired.
- We will give as subscription prizes young animals, either male or female, of any of the following breeds: - Shorthorns, Herefords, Galloways, Ayrshires, Jerseys, a bull or heifer (of fair quality), purely bred, for 100 new subscribers, accompanied by \$100. We can also supply home-bred or imported stock of any desired breed, age or quality. In all cases we will guarantee satisfaction as to the quality, breeding and value of the animal. We will give very liberal terms to agricultural and other societies, and farmers in new sections, special inducements in sheep and poultry. Write for particulars.

IMPLEMENTS, ETC.

- For 110 new names a Bain Farm Truck, value \$75, manufactured by Bain Wagon Co., Woodstock, Ont.
 - For 65 new names a Patent Iron Frame Section Spring Tooth Cultivator, value \$36, manufactured by J. O. Wisner & Son, Brantford.
 - For 110 new names we will give a first class wagon, value \$75, manufactured by the Chatham Manufacturing Co., Chatham, Ont.
 - For 75 new names we will give one of the celebrated Westward Ho Sulky Plows, value \$40, manufactured by Copp Bros., Hamilton, Ont.
 - For 125 new names we will give one of Halliday's Standard Wind Mills, value \$75, manufactured by the Ontario Pump Co., Toronto, Ont.
 - For 140 new names we will give a Hay Loader, value \$75, manufactured by Matthew Wilson & Co., Hamilton, Ont.
 - For 100 new names we will give a large Straw Cutter with Carriers attached, value \$55, manufactured by B. Bell & Son, St. George, Ont.
 - For 40 new names we will give a large Agricultural Furnace, value \$22, made by the Gowdy Manufacturing Co., Guelph.
 - For 65 new names we will give a new Fanning Mill, value \$35, manufactured by Manson Campbell, Chatham, Ont.
 - For 90 new names we will give one of Osborne & Co.'s large Stock Scales, value \$50, capacity 4,000 lbs., manufactured by Osborne & Co., Hamilton, Ont.
 - For 40 new names we will give a Winchester Repeating Rifle or a Breech-loading English Shot Gun of latest design and good quality, or 10 new names we will send an improved Breech-loading German Rifle.
 - For 40 new names we will give the Model Harness, valued at \$20, manufactured by the Farmers' Supply Co., 176 King St. East, Toronto.
- All stock or goods shipped free on board the cars

NOT "THE COMING DRILL" BUT ALREADY THE LEADING DRILL.



It possesses every desirable quality arranged in the most simple and attractive form. Has a positive force feed which does not clog or crack the grain. It commences to sow as soon as the horses move, misses no ground, covers the seed perfectly, and the depth can be instantly regulated as required. Sows ALL GRAINS from FLAX SEED TO PEAS AND BEANS with accuracy and uniformity. Has a refined Channel Steel Frame and our New Patent Hoe Connection; the strongest, simplest and best yet invented.

OUR HARVESTING AND HAYING MACHINES ARE UNEQUALLED AND UNEXCELLED.

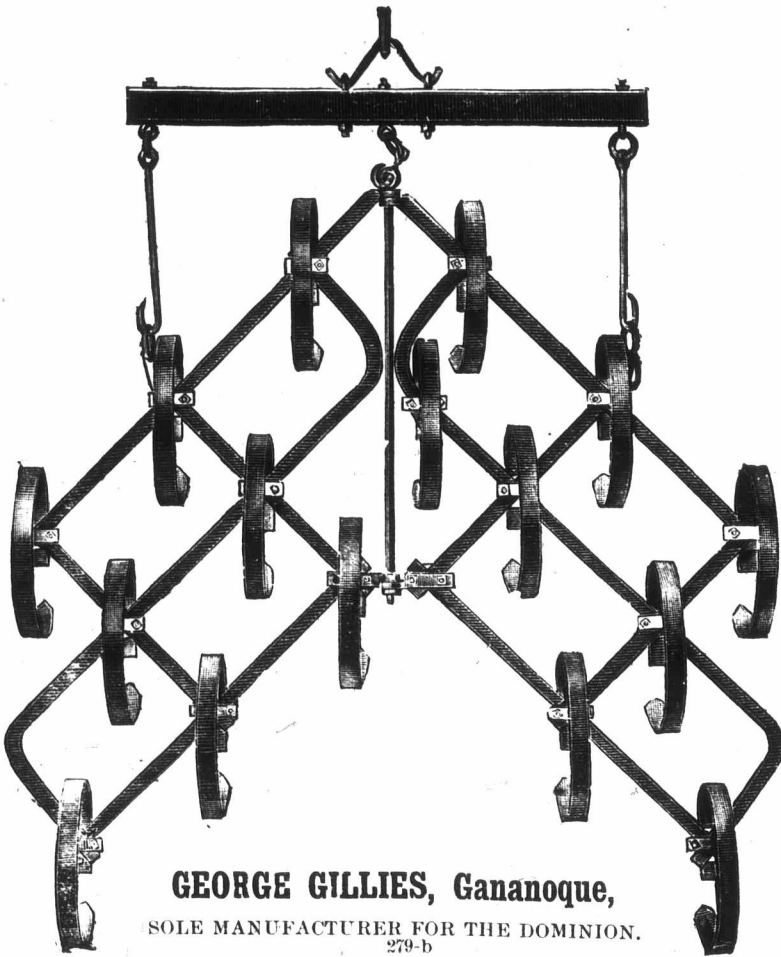
SEND FOR OUR LARGE, HANDSOMELY ILLUSTRATED CATALOGUE.

THE PATTERSON & BRO. CO., WOODSTOCK, ONT.

Branch Office and Warerooms, 62 Princess St., Winnipeg, Man.

276-f

LaDOW'S Improved Patent Float Spring-tooth HARROW

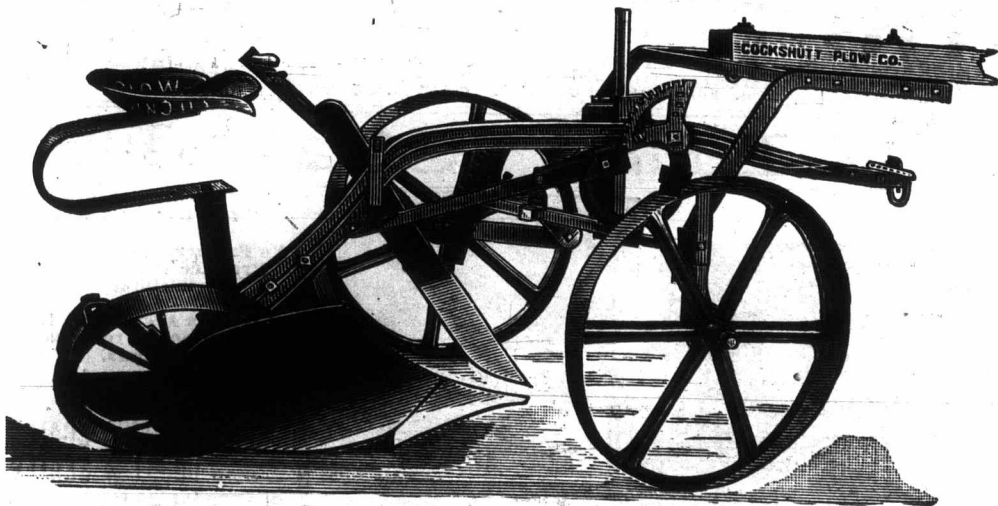


GEORGE GILLIES, Gananoque,
SOLE MANUFACTURER FOR THE DOMINION.

Many improvements have been made on this Harrow during the past year, making it now the best Spring-tooth Harrow before the public. It is made in two sizes, 16 and 18 teeth respectively, with and without runners. All steel frame, no wood to rot or wear out. See one of these Improved Harrows before buying any other, and write for full descriptive circulars of them. All implements guaranteed for one year.

MARCH
COCKS
COCK
GURN
CAPA
Platform,
provide
Designed B
Fa
Made ven
material a
structed t
guards can
desired, an
them. Se
nearest h
direct to m
GUR
M

COCKSHUTT'S "J. G. C." RIDING PLOW—THE BEST IN THE WORLD.



Descriptive Catalogue Mailed Free on Application.

COCKSHUTT PLOW CO., (Ltd.) BRANTFORD, CANADA.

279

One-third natural size.

OUR MANUAL OF

WAX BEAN

EVERYTHING FOR THE GARDEN

For 1889 is the handsomest and most complete Garden Guide ever published. It is really a book of 140 pages, size 9x11 inches, contains three colored plates, and illustrations of all that is new, useful and rare in Vegetables, Flowers, Fruits and Plants, with plain directions "How to grow them," by Peter Henderson

This manual we mail to any address on receipt of 25 cts. (in stamps). To all so remitting 25 cts. for the manual, we will at the same time send free by mail, in addition, their choice of any one of the following Splendid Novelties, most of which are now offered for the first time, and the price of either of which is 25 cts.: One packet of Autumn King Cabbage, or one pkt. of Yosemite Mammoth Wax Bean (see illustration), or one pkt. Delmonico Musk Melon, or one pkt. Giant Pansy, or one pkt. Scarlet Triumph Aster, or one pkt. Sunflower "Silver and Gold," or one plant of the climber Blue Dawn Flower, or one plant of the White Moonflower, or one Bermuda Easter Lily, or one plant of either a Red, Yellow, White, or Pink Everblooming Rose—on the distinct understanding, however, that those ordering will state in what paper they saw this advertisement.

PETER HENDERSON & CO., 35 Cortlandt St., NEW YORK.

279-a

GURNEYS' FARM AND STOCK SCALE

PORTABLE, ON WHEELS. WITH DROP LEVER.

CAPACITY, 3,000 LBS.

Platform, with extensions, 6 ft. x 2 ft 6 in., provided with guards, allowing ample room for any animal.

Designed Especially to Meet the Wants of Farmers and Stock-Raisers.

Made very strong, of the best material and finish. So constructed that extensions and guards can be uncoupled when desired, and scale used without them. See this scale at your nearest hardware, or write direct to makers.



Patented April 25th, 1888.

PRICE MODERATE.

—MANUFACTURED ONLY BY—

GURNEYS & WARE SCALE CO.,

HAMILTON, - - ONTARIO.

MANUFACTURERS OF ALL KINDS OF SCALES.

275-y

STOCK GOSSIP.

A meeting of the Holstein-Friesian Association is announced, in other columns, to take place in Guelph on March 12th. A first-rate programme is promised.

Mr. Goldworthy and Mr. Isaac Gardiner, of Morpeth, have been making a tour of the Province, looking for Holsteins. They last month bought two bulls and one heifer from Mr. John Leys, Toronto, Ont.

Mr. WELD.—Dear Sir: At a meeting of the farmers of the County of Dennis, a vote of thanks was given you for the information given to the farmers, and which I, as secretary, was to tender you.—A. S. McDONALD, Virden, Man.

Mr. Thomas Russell, of Exeter, made us a short call a few days ago. He reports the following sales:—Bull calf to Mr. Hoist, Crediton; a bull and two heifers to John Mack, Carberry, Man.; bull, imp., to Thomas Douglas, Strathroy; bull to Godlip Murner, Zurich.

Mr. Frank Shore, of White Oak, has recently sold the yearling bull, Sweetmeat, out of Lena Languish, and got by imported Vermillion, to Mr. Allison, Frome. Mr. Shore has also bought a very promising young bull, imported, Aberdeen Hero, from Mr. John Dryden, Brooklin, Ont.

The Queen took a first prize in one of the classes at the recent English dairy show with a beautiful Shorthorn, originally bought for her Majesty at Windsor, from a well-known breeder in Westmoreland. A fine herd of Galloway cattle has recently been purchased for the royal farm.

We have received the eighteenth annual circular of the Orveo Poultry Farm, Boston, Mass. The proprietors, Messrs. W. H. Rudd & Son, are probably the largest and most successful poultry farmers in the United States, and devote themselves exclusively to their Orveo brown egg strain of Plymouth Rocks.

The Clydesdale Association's Show, which takes place on the 14th inst., promises to bring out the grandest show of Clydesdale stallions ever got together at one show. Numerous buyers will no doubt be present from the U. S. A. and from various parts of Canada. There is a strong demand for Canadian-bred stallions. We hope they will make a good display.

Mr. E. W. Charlton, of Duncrief, Ont., called at our office a few days ago. He reports his Clydesdales as doing well. The famous mare, Polly Craig, of which we gave an illustration in our January number, girths 8 feet 4 inches, and weighs 2,200 lbs. Her daughter, Queen of Maplewood Farm, which was shown in same illustration, is considered as fine a mare as her dam.

Mr. Wm. Davies and Prof. James Robertson are endeavoring to work up a Swine Breeders' Association for the Province. This, like the Sheep-breeders' Association, is much needed, and we hope to be able to announce a general meeting in a short time, perhaps in our next number. All interested in swine breeding should give these gentlemen their hearty support.

Mr. Joseph Yuill, Carlton Place, Ont., writes us:—My card, in your Breeders' Directory, brings me a great many customers. I sold all the young bulls I had, and could have sold a great many more if I had had them. There has been a great demand for Ayrshires lately. Farmers and dairymen are beginning to find out that there is no breed of cattle so well adapted for the Canadian dairy as the Ayrshire. Your paper should be in every farm house in the Dominion.

An aged imported Shropshire ewe belonging to John Campbell, Jr., Woodville, Ont., which lately died, dropped eleven lambs in seven years. Nine were sold as lambs and shearings, the prices of which, together with prizes awarded, amounted to \$667.00. A choice three-shear ewe, and a ram lamb still remaining in the flock, with some fifteen fleeces, would add another \$100.00 to her credit. While she was never fitted to show, her progeny were yearly prize winners at the leading fairs.

DEAR SIR—I now enclose money to pay up to January 1, 1890. I am not strictly a farmer, but have been a subscriber for your paper since its first publication. I find it growing in interest every year, and read its contents with as much avidity as any enthusiastic agriculturist. I do not know of any way in which a dollar can be so well spent as in providing your paper for family reading. Wishing you continued success, which you so richly deserve, Yours, very sincerely, SHERIFF GLASS.

We encourage breeders to send in their Stock Gossip, because it incites an interest in the better class of live stock. Our general readers soon learn who the principal breeders are, and which breeds are most popular. For this reason we ask all breeders to send lists of their sales and purchases. The more frequent the sales the more inducements there are for enterprising farmers to buy. We all want to buy animals of such breeds as sell readily. We seldom hear from our Jersey breeders. What is wrong, friends?

R. Delbridge, Winchelsea P. O., Ont., has made the following sales of pure-bred Berkshire pigs of late:—W. Roncliffe, Thedford, one boar; R. Seldon, Ingersoll, one sow; T. Carbert, Clinton, one boar; H. Muir, St. Mary's, one boar; T. Hazelwood, Winchelsea, one sow; J. McKellar, Brenton, one boar; J. Hooper, Blanshard, one sow; G. Farner, Crediton, one boar; George Green, Fairview, five sows. R. Delbridge was very successful as an exhibitor in 1888, having taken 21 first and 11 second prizes on five pigs; also a diploma for best pen. He has a few choice young pigs of the above breed for sale, and expects a good supply for the spring trade. His are a large strain, and registered.

STOCK GOSSIP.

Mr. Arthur Johnston reports the Greenwood herd of Shorthorns as in good all round shape; nothing fat, but everything healthy and in good order.

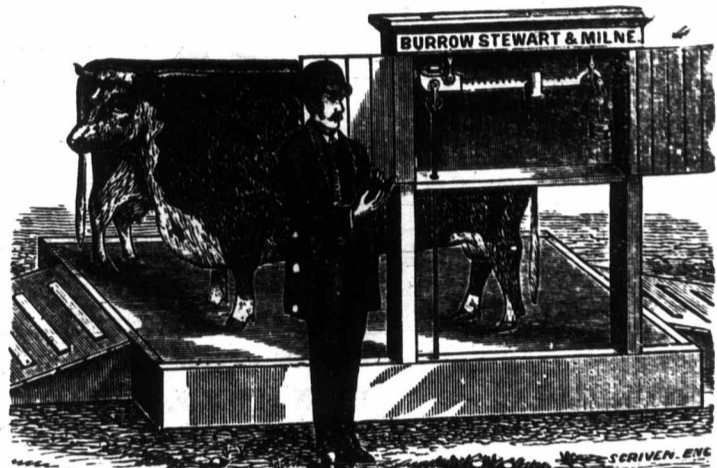
Mr. Jno. Dryden, M.P.P., Brooklin, writes as follows:—The inquiries for choice Shorthorns still continue to come through every mail.

Smith Brothers, Churchville, Ont., in a letter to us, say: Our stock have wintered so far very well, and are in the best of health.

J. G. Snell & Bro., Edmonton, Ont., have made the following sales of Cotswolds and Berkshires since September 1st, 1888:—J. H. Burnett, Poole, Ont., Berkshire boar; W. C. Shearer, Bright, Ont., Berkshire sow; John Adams, Port Perry, Ont., Berkshire boar; W. H. Spencer, Morpeth, Ont., Berkshire sow; W. J. Tucker, Manitowaning, Ont., Berkshire boar and sow; Edmund F. Feilde, Watford, Ont., Berkshire boar; John J. Imrie, Romney, Ont., Berkshire sow; J. C. McDonald, Walnut, Ont., Berkshire boar; A. McEachern, The Grange, Ont., Berkshire boar; Robert Ramsay, Nottawa, Ont., Berkshire boar; Berv. H. Parker, Wisbeach, Ont., Berkshire boar; Angus McBean, Galt, Ont., Berkshire boar; W. C. Edwards, Rockland, Ont., Berkshire boar and sow; J. R. Martin, Cayuga, Ont., Berkshire boar; Richard Vines, Molesworth, Ont., Berkshire boar and sow; J. S. Williams, Knowlton, Que., Berkshire boar; Wm. Irwin, London, Ont., Berkshire boar; Francis Learmouth, Fitzing Harbor, Ont., Berkshire boar; A. J. Lovejoy & Son, Roscoe, Illinois, Berkshire boar and sow; W. A. Shields, Milton, Ont., Berkshire boar; Robert Marsh, Richmond Hill, Ont., Berkshire sow; G. C. Keays, London, Ont., Berkshire boar; John C. Gibson, Moosong, Manitoba, Berkshire boar; A. F. Woodward, West Montrose, Ont., Berkshire boar and sow; A. H. Blyns, Bedford, Ind., Berkshire boar; H. Snell & Sons, Clinton, Ont., Berkshire boar; W. C. Binion, Iroquois, Ont., Berkshire boar and two sows; Levi E. Bears, Arkona, Ont., Berkshire boar and sow; John F. Thredgyle, Walkerton, Ont., Berkshire sow; C. Dodge & Son, Dodgeville, Ohio, one Cotswold ram and five ewes; J. Runciman, Orwell, Ohio, four rams; B. Watson, Edmonton, one ram, J. Cooney, Brampton, Ont., two rams; Wm. Stark, Ashgrove, Ont., one ram; Wm. Wilson, Edmonton, one ram; James Jackson, Port Perry, Ont., one ram; James Nowbaw, Brampton, Ont., one ram; J. O. Snell, Edmonton, Ont., one ram; Peter Giffen, Beffonuta, Ont., one ram; D. Tache, Brampton, Ont., one ram; Wm. Laidlaw, Mayfield, Ont., one ram; Wm. Grogan, Manitou, Manitoba, one ram; William Grey, Mayfield, one ram; J. O'Leary, Mayfield, Ont., one ram; Arthur Carroll, Wilkesort, Ont., one ram; James Russell, Richmond Hill, Ont., one imported ram; Frank Wilson, Jackson, Mich., two rams and six ewes; H. A. Switzer, Switzerville, Ont., one ram; C. W. Cook, White Sulphur Springs, Montana, forty Cotswold rams; Brian & Williams, Westchester, Ind., two imported ewes. A large majority of those who have written us say they saw our advertisement in the FARMER'S ADVOCATE.

FAY CURRANT GRAPES HEADQUARTERS IN AMERICA. NIAGARA, EMPIRE STATE, EATON, MOYER and all others, new and old; also small fruits and first-class establishment. Free Illustrated Catalogue. GEO. S. JOSSELYN, Fredonia, N. Y.

SCALES! SCALES!



The Platform of this Scale is 6 feet by 4 feet. No Farmer, Stock Raiser or Produce Dealer should be without one. It weighs Accurately from half pound to 4,000 pounds. DAIRY SCALES, SPECIAL FAMILY SCALES, COUNTER SCALES, PLATFORM SCALES, HAY SCALES, &C., &C. Quality, Accuracy and Beauty of Workmanship Unsurpassed. 271-y

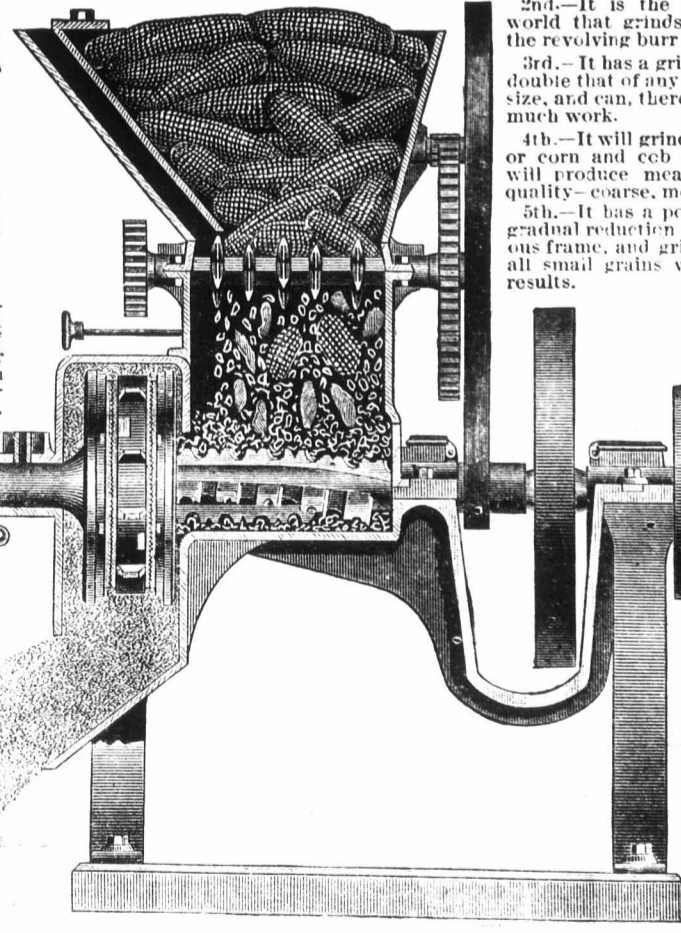
BURROW, STEWART & MILNE, Hamilton, Ont.

SEEDS RENNIE'S GREAT DOLLAR COLLECTION OF GARDEN SEEDS. \$1.00

RENNIE'S SEEDS ARE THE BEST. In order to induce hundreds of new customers to use them, I am offering this complete collection of the very choicest Vegetable Seeds, including many novelties, FREE BY MAIL for \$1.00. The collection contains full sized Long Blood Beet; Rennie's Nonpariel Lettuce, the best in cultivation; Golden Hearted Celer; New Cory Corn, the sweetest variety grown; Olive Gem Radish, the finest new Radish; and standard varieties of Cabbage, Carrot, Cucumber, Melon, Spinach, Tomato, Turnip and Herbs, also a pound of the best Wax Beans, and a pound of the New Pea, Pride of the Market, which is the finest Garden variety in cultivation. The entire collection amounting, at Catalogue rates and postage, to \$1.50. will be sent free by mail to any address in Canada, for \$1.00. My Annual Descriptive Catalogue now ready. Free to all applicants. Send for it at once, and induce your friends to send with you. I will supply Five of the above Collections for \$4.00. Address, WILLIAM RENNIE, Seed Grower, TORONTO, ONT.

THE DUPLEX CORN FEED MILL

Is the best Mill in the world. Why? BECAUSE—1st.—It is provided with a double set of grinders or burrs, for which reason it is called the Duplex.



2nd.—It is the only Mill in the world that grinds on both sides of the revolving burr at the same time. 3rd.—It has a grinding surface just double that of any other Mill of equal size, and can, therefore, do twice as much work. 4th.—It will grind any kind of grain or corn and cob equally well, and will produce meal of any desired quality—coarse, medium or fine. 5th.—It has a positive force feed, gradual reduction plates, a continuous frame, and grinds ear corn and all small grains with equally good results.

Every farmer should have one. It will pay for itself in a few months. For further particulars address THE JOHN ABELL ENGINE AND MACHINE WORKS TORONTO. 259-y

A 100,000 MADE GLAD THE S of 6 UN 100,000 HOMES MADE HA

We can now give the farmers what they want and have so long looked for.

THE NEW It has an acro... The cultivator required depth vator obtainab ALL S Ask fo list. Respons

A CURE FOR HARD TIMES

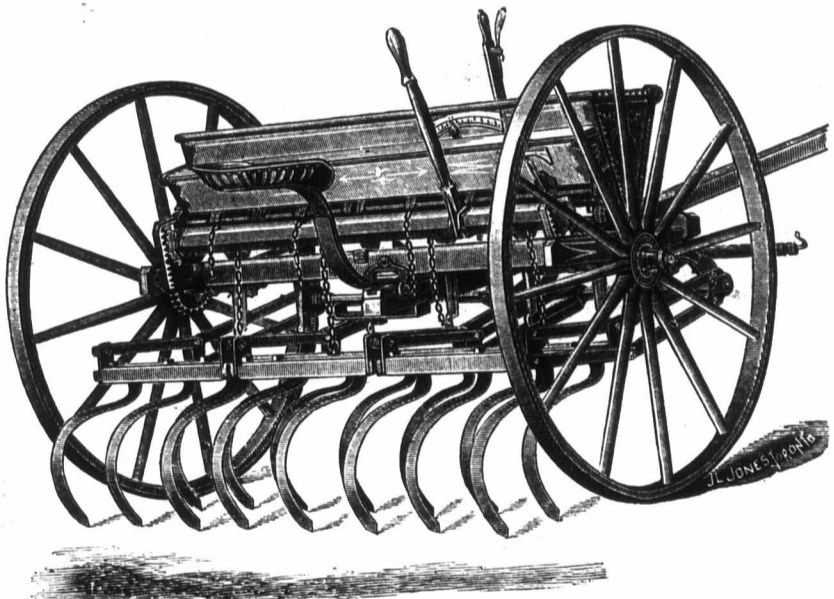
100,000 HEARTS MADE GLAD
BOLEY'S NORTHERN SPY POTATO
 THE GREATEST DISCOVERY SINCE THE ADVENT OF THE EARLY ROSE
 6 TO 8 HUNDRED BUSHELS TO THE ACRE UNDER 47 SVORN TESTIMONIALS.
 100,000 HOMES MADE HAPPY

SEEDS AT YOUR DOOR AT WHOLESALE PRICES. Having grown a large quantity of the following choice and valuable seeds the past season, and in order to introduce them, with our wonderful new Potato, into 100,000 homes, we make the following UNPRECEDENTED OFFER: For \$1.00 in postage stamps or money, we will send a box post-paid, containing one packet each of the following NEW AND IMPROVED SEEDS, and one medium-sized tuber of **BOLEY'S GREAT NORTHERN SPY POTATO**, the greatest discovery since the advent of the EARLY ROSE.
POTATO, the greatest discovery since the advent of the EARLY ROSE.
Wilson's Early Blood Turnip Root, earliest and best.
Bastian's Half-Long Winter Beet, best variety.
Wilson's Best of All Pole Beans, good for snap-shorts in winter.
Wilson's Best of All Branch Beans, rich, tender, and buttery.
Wilson's Advance Cabbage, best and earliest.
Wilson's Premium Flat Dutch Cabbage, best late variety.
Wilson's Green Cluster Cucumber, best for table use.
Wilson's Long Green Cucumber, best for pickles.
New Cory Sugar Corn, the earliest in the world.
Wilson's Large Early Green Sugar Corn, sweet and delicious.
California or Golden Pop Corn, best variety.
New Self-Blanching Celery, extra quality, needs no banking up.
Wilson's Extra Early Lettuce, heading sort.
Jordan's Gray Monarch Watermelon, very large, sweet, and sugary.
Milner's Cream Nutmeg Melon, best flavored in cultivation.
Improved Round Yellow Danvers Onion.
NEW SPANISH KING ONION, 3-pound onions from seed first year.
Abbot's Improved Sugar Parsnip.
Baby King Pepper, finest, largest, sweetest pepper ever seen.
JUMBO, of CALIFORNIA, the largest pumpkin in the world; has weighed 400 lbs.
Early Rose Gem Radish, best and earliest.
New Charter Radish, best summer variety.
White Pineapple Squash, good for pies, keeps all winter.
Early Summer Butter Squash.
Turner's Hybrid Tomato, best and finest ever introduced.
NEW ZEALAND FIG TOMATO, excellent for preserving; cured and dried, equal to the best figs.
Munch Strap-Leaf Turnip, tender, sweet.
Golden Globe Ruta Baga, best for table use.
VEGETABLE PEACH, easily grown from seed first year; makes pies or preserves equal to the best peaches.
 Sample packet of **Wilson's True Learning Corn**, the earliest and best field corn in cultivation.
New Mammoth Zinnia, double as a Dahlia, bright as a rose.
Washington Anemone, very large all bright, beautiful colors.
Giant German Panicle, best in all.

33 FULL-SIZED PACKETS, with DIRECTIONS FOR CULTIVATING, and ONE WHOLE POTATO for \$1.00 FIVE BOXES \$4.00, TEN BOXES \$7.00, post paid. Address plainly: **WILSON, MECHANICVILLE, BRUCKS COUNTY, PENNA.** MENTION THIS PAPER. **SAMUEL WILSON, MECHANICVILLE, BRUCKS COUNTY, PENNA.** BEAUTIFUL, ILLUSTRATED and DESCRIPTIVE 144-PAGE CATALOGUE ACCOMPANIES EACH ORDER.

FARMERS, READ THIS!

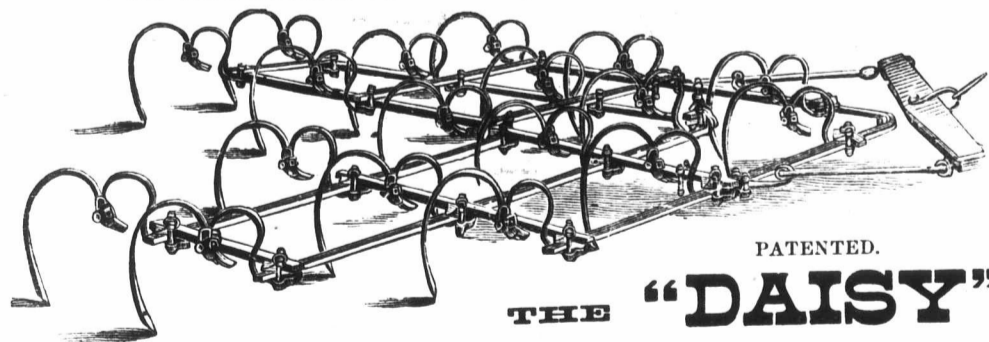
We can now give the farmers what they want and have so long looked for.



LATEST AND BEST. COVERED BY PATENTS.

THE NEW MONARCH.

The NEW MONARCH is the latest improved seeder in the market. See and examine it before buying. It has an accurate FORCE FEED. Sows and covers all kinds of grain in any quantity required to the acre. The cultivator is in three sections, independent of each other, and all the teeth can be set to work any required depth in the ground INSTANTLY by a lever in easy reach of the driver, making it the best cultivator obtainable. This feature alone is worth half the price of the seeder. Write for illustrated catalogue.



PATENTED.

THE "DAISY"

ALL STEEL FRAME SPRING TOOTH HARROW.

Ask for the "Daisy," and buy no other; it is the best. Send for illustrated catalogue and price list. Responsible and Pushing Agents wanted in all unrepresented districts.

THE J. W. MANN MFG. CO., BROCKVILLE, ONT.

278-c

STOCK GOSSIP.

Those who have recorded Shropshires should remember that the American Record will receive pedigrees of aged animals until April, 1889, after that date they will not be received, unless the time is again extended, which is doubtful. See advertisement in this issue. For the convenience of breeders who need additional blanks, Mr. Levering has sent a quantity to us, which may be had on application.

In this number are advertised several important auction sales. On March 19th E. W. Ware, will sell Ayrshires and Jerseys. On March 16th to 23rd inclusive, there will be sold at Grand's Repository, 450 horses. On the 28th inst., James S. Smith, will sell Shorthorns, and on April 3rd, the famous Jersey herd of the Oaklands Farm, will be dispersed. On the same date, Thos. Irvine, will sell all his Ayrshires and Clydesdales. Read these advertisements closely.

We recently made a call on Messrs Jeffery Bros., Whitby, Ont. Their sales of shorthorns have been very good; all their bulls have been disposed of. They have a large herd of very useful Shorthorns. Their Clydesdales are in good condition, and they have a number of very promising young stallions and mares. One of the best of the lot is their last importation, Merriment, the sweepstakes horse at the South Ontario Show, where he beat several of Canada's most noted horses. See our last Sept. number for a view of Coldstream Stock Farm.

Mr. E. W. George, of Putnam, Ont., breeder of Chesters and Suffolks, reports as follows:—Sold to H. Percy, Copenhagen, 1 boar and sow; W. R. Martyn, Springfield, 1 boar; E. Marsh, Gladstone, 1 boar; E. Fairbrother, Copenhagen, 1 sow; W. White, Mitchell, 1 sow; Jos. Baisdon, Sheddon, 1 boar; B. Michael, Brussels, 1 boar; A. McBrayne, Thamesville, 1 boar; J. Rowcliffe, Exeter, 1 boar; H. O'Brien, Paris, 1 sow; Frank Davis, Wardsville, 1 sow; A. Ste. Marie, Lantzville, P. I., 1 boar; W. Row, Avon, 1 sow; W. Lickman, Comber, 1 boar and sow; C. Her, Essex Centre, 1 boar, 4 sows; W. Prouse, Ingersoll, 1 boar; J. W. Kester, Mount Albert, 1 boar; Hewer & Olds, Springfield, 1 boar; R. Wright, Oxley, 3 sows; F. Baylis, Listowel, 1 boar and sow; R. Reid, London, 2 sows. My Chester Whites are wintered splendidly. Ten imported and home-bred sows, bred to three imported boars for spring trade, and expect something fine.

NOTICES.

Our subscribers will find it to their interest to refer to our advertising columns, to the advertisements of our leading manufacturers, seedsmen and stockmen, etc. We refuse many advertisements every issue for the protection of our readers from frauds.

Our readers will see in this issue that Duane H. Nash, of Millington, N. J., is now prepared to deliver free the Acme Pulverizing Harrow, Clod Crusher and Leveler. We would recommend our readers to examine this harrow. Many farmers speak in the highest terms of it.

Buy your seeds from good reliable seed merchants. The advertisements of many of the leading Canadian and American houses will be found in this issue. We feel sure our readers will be treated fairly by all the firms whose advertisements appear in this issue. Send in your orders early so that there will be no delay when spring opens up.

Buy your seeds from good reliable seed merchants. The advertisements of many of the leading Canadian and American houses will be found in this issue. We feel sure our readers will be treated fairly by all the firms whose advertisements appear in this issue. Send in your orders early so that there will be no delay when spring opens up.

MY DEAR FRIEND,—I wish you to send me a copy of the old reliable FARMER'S ADVOCATE—the farmer's friend. I would be much pleased if you would send by parcel post say six horse chestnuts. I wish to try the experiment of growing them; I believe it will be a success. Hoping you are enjoying the pleasures of life as usual. When you come out to the coast I invite you to remain over a few days and enjoy my hospitality. Respectfully yours, A. W. McARTHUR, Manager of the Canadian Agricultural Coal and Colonization Company (Limited).

BURLINGTON ROUTE DAILY EXCURSIONS TO THE PACIFIC COAST, COLORADO, WYOMING AND UTAH.—Railroad ticket agents of the Eastern, Middle and Western States will sell, on any date, via the Burlington Route from Chicago, Peoria or St. Louis, round-trip tickets at low rates to San Francisco, Los Angeles, San Diego, Portland, Tacoma, Seattle, Vancouver or Victoria; also to Denver, Cheyenne, Colorado Springs or Pueblo. For a special folder giving full particulars of these excursions, call on your local ticket agent, or address P. S. EUSTIS, Gen'l Pass. and Ticket Agt., C. B. & Q. R., Chicago, Ill. Adv't. 278-c.

We have had only one insertion of our "Broad Rib Sheet-Steel Roofing" advertisement in your valued paper, but we have pleasure in saying we have already found it one of the best, if not the best, mediums for advertising goods of this description. Numerous enquiries, many of them from the provinces farthest away, have been coming in with nearly every mail, showing us your paper has a very widely-extended circulation. We are much pleased with the results of our ad. Our orders through our agents and from this source are already so numerous and large that the capacity of our factory will be taxed to its limit to get them out in time for the spring trade. Respectfully yours, THOS. McDONALD & Co., Toronto.



PROVIDENT LIFE & LIVE STOCK ASSOCIATION

Chief Office 47 Arcade, Toronto.

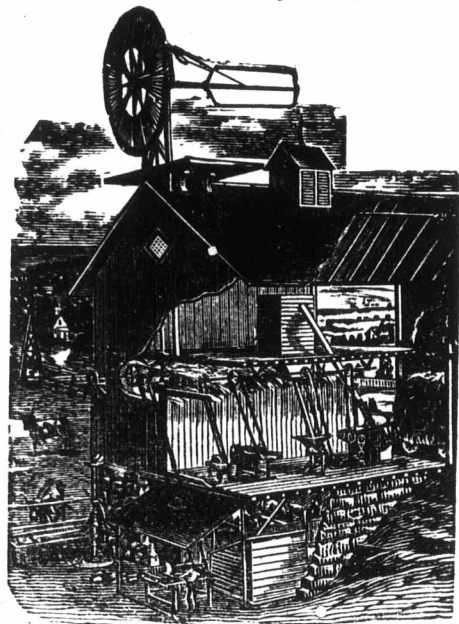
INCORPORATED--A MUTUAL BENEFIT ASSOCIATION

In the Live Stock Department, two-thirds the loss by death of the live stock of its members through disease or accident; also for depreciation in value for accidental injury. Those interested send for prospectuses, claims paid, etc. Reliable Agents wanted. **WILLIAM JONES**, SECRETARY.

"BELL"

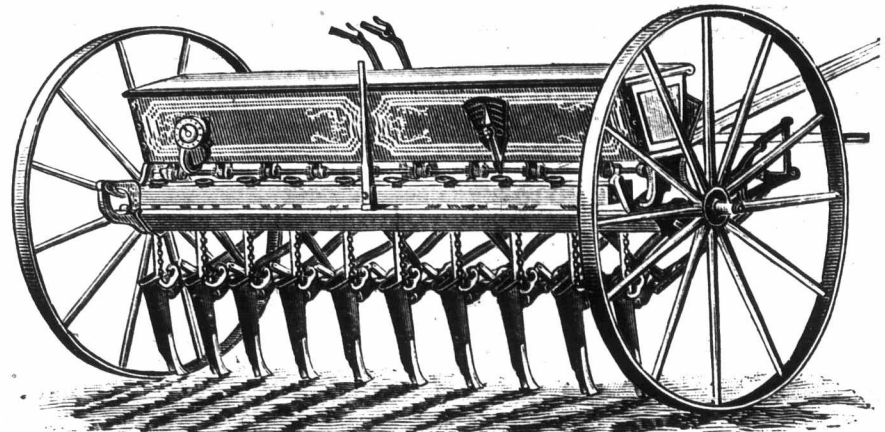
PIANOS ARE THE ORGANS
LEADING INSTRUMENTS
FOR PURITY OF TONE
& DURABILITY.
CATALOGUES FREE
W. BELL & CO. GUELPH, ONT.

ONTARIO PUMP Co.
(LIMITED),
TORONTO, ONT.



MANUFACTURERS OF
**WIND MILLS, FEED GRINDERS, HAYING TOOLS,
IRON AND WOOD PUMPS.**
And a full line of railway, town, farm and ornamental water supply materials. Geared Windmills for driving machinery, pumping water, etc., from 1 to 40 horse-power. Send for Descriptive Catalogue.

Hoosier Steel Frame Grain Drill



*ENC CO

GUARANTEED THE BEST IN THE WORLD.

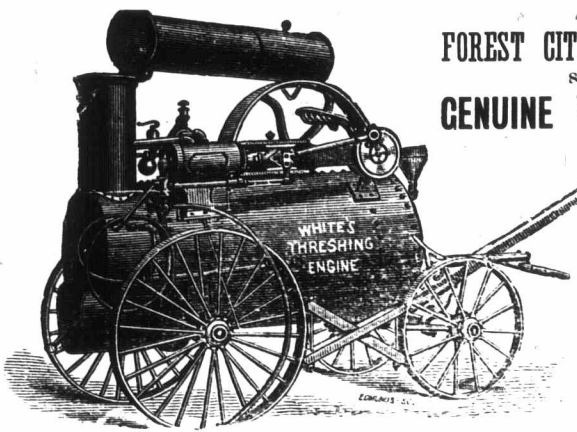
No other Drill made can be instantly regulated to run at any desired depth without stopping the team. No other Drill will sow all kinds of grain thoroughly, even and properly covered at a uniform depth in all kinds of soil. No other Drill commences to sow the instant the horses commence to move, and misses no ground when starting in, after turning. No other Drill equals the Hoosier when used as a cultivator and no single cultivator surpasses it, thus combining two implements in one.

NOXON'S NEW STEEL BINDER. See the greatest invention of the age in our new Knotter which cuts but one cord, makes no waste ends and saves cord in binding. Read our new Descriptive Catalogue for 1889.

NOXON BROS. MFG. CO.,

INGERSOLL, ONTARIO.

278-c



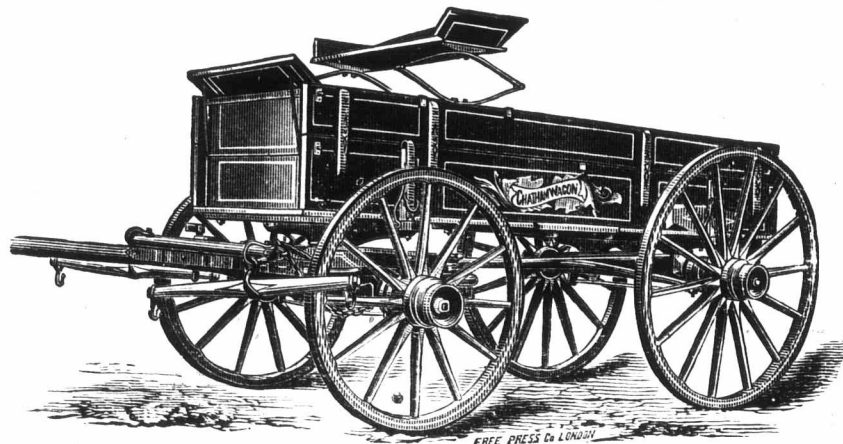
"THE FITTEST SURVIVES."
FOREST CITY MACHINE WORKS, LONDON, ONT
SOLE MANUFACTURERS OF THE
GENUINE WHITE THRESHING ENGINE,

Special 20-horse power Portable Saw Mill Engine, (same pattern and style), Light and Heavy Traction Engine, and is licensed by all Insurance Co's, and has proved itself to be the most durable. The Engine for the Northwest is made to burn either coal, wood or straw. A thorough warranty given with all Machines and Engines. Call and examine our Machinery, or correspond with us before purchasing elsewhere.

NEW IRON SEPARATOR.
GEO. WHITE, Proprietor and Manager.
H. B. WHITE, Head Traveller.
HUB. J. WHITE, Sec. -Treas.
A. W. WHITE, Asst. Manager.
F. J. WHITE, Asst.-Sec.

267-1f

The CHATHAM MANUFACTURING CO., Ltd.
Chatham, Ontario - Canada.



MANUFACTURERS OF THE

CHATHAM WAGON

Of which we give a faithful illustration, and which the Government of the Dominion of Canada has adopted as the Standard Wagon. We simply ask intending purchasers, in their own interests, to send to us for particulars of the Chatham Wagon before purchasing any other.

**Railway Platform Baggage Trucks. Farm and other Dump Carts.
Hardwood Lumber and White Oak Gang Sawed Ship Plank.
The Patent Champion Hay Rack, Etc., Etc.**

CORRESPONDENCE SOLICITED.

268-y