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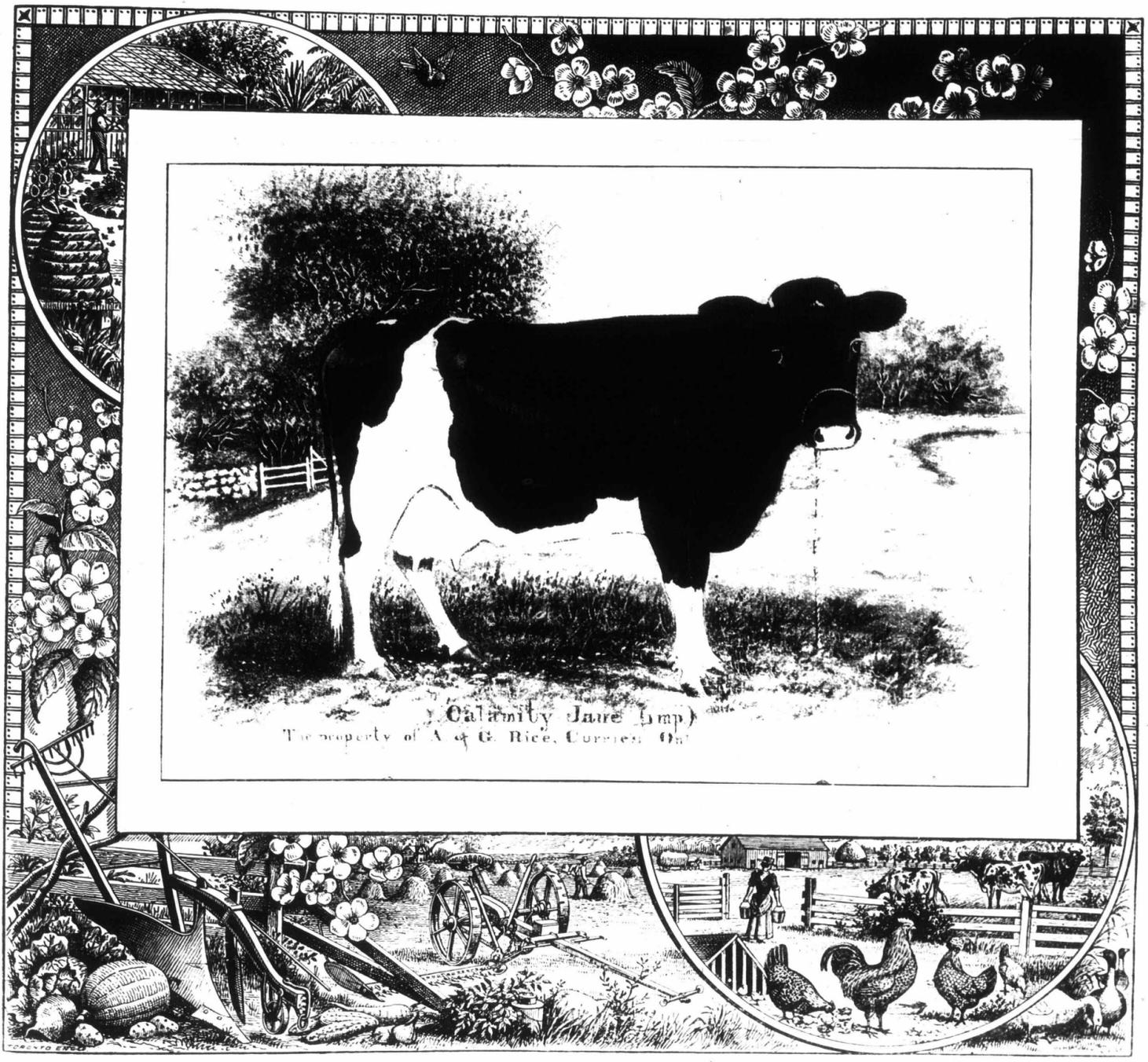
THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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VOL. XXXI. LONDON, ONT., AND WINNIPEG, MAN., JANUARY 15, 1896. No. 398.



Calamity Jane (Imp)
The property of A. & G. Rice, Curries, Ont.

CALAMITY JANE'S SWEEPSTAKE COW IN THE ONTARIO FAT STOCK SHOW DAIRY TEST, DECEMBER, 1895
OWNED BY A. & G. RICE, HOLSTEIN-FRIESIAN BREEDERS, CURRIES, ONT.

EDITORIAL.

Our Position Endorsed.

EDITOR FARMER'S ADVOCATE:

SIR,—Your article on "Live Stock Husbandry and the Dominion Experimental Farm Staff" is very much to the point, and expresses the thoughts of the most intelligent farmers of my acquaintance. It covers the ground so thoroughly that I should not have trespassed upon your space except to thank you for the very able manner in which you have embodied the views of the farming community. But the time seems appropriate for an expression of opinion when a new Minister of Agriculture is taking hold of the reins. A word might direct his thoughts into a channel whereby live stock would receive the consideration it deserves.

Dairying has been so energetically and fluently advocated that the supply of cheese and butter has increased to such an extent that a halt must be called in that direction for a time. Prof. Robertson, who has had charge of that department, has conducted it with eminent ability; but his services are now required mainly in another capacity.

In looking over the reports of the Minister of Agriculture, I find the following staff: Director, Agriculturist, Horticulturist, Chemist, Entomologist and Botanist, and Poultry Manager. Whilst dairying and fruit raising, analyzing, insect studying, and poultry growing all receive attention, live stock has been overlooked, and one branch, that of sheep husbandry, entirely neglected.

We know that farming, the world over, depends upon live stock as its sheet-anchor. No matter what the soil or how rich naturally, crops cannot be grown any length of time without stock. There is not a farm in Ontario that can be carried on successfully without them. And I make another equally broad assertion; that there is not a farm in this whole Dominion on which the stock might not be improved. If I am right in these assertions, what a field is open along the very lines which you have indicated! No matter if one grows the best barley, or oats, or peas, the work is only a partial success unless one has the stock to consume them profitably.

Again, where are the steers to come from to enable the dead meat trade, which the Government intend establishing, to be a success? At present they are not in the country, and for the sake of our good name, don't allow a hoof to be shipped that is not strictly first-class.

Our mutton is much superior to our beef, as a rule, and this trade may be made quite profitable in a short time, as it only takes a few months to produce a lamb, whereas it will take three years from now to have the steer ready for shipment.

But enough has been said to endorse the ground you have taken. I hope you will not let the subject drop; it is a most important matter.

"FARMER."

A Subject for Congratulation.

It affords us no little satisfaction to announce, as was foreshadowed in our issue of Dec. 16 last, that the property owners of London, Ont., at the recent municipal elections carried the by-law authorizing the expenditure of \$25,000 for the erection of new live stock and other buildings for the Western Fair, together with a general rearrangement of the grounds. All the old ramshackle stock buildings had long since outlived their usefulness, and the horse sheds, cut off to the east by the race track, were practically inaccessible to the public. The crowding of the agricultural machinery into the southwest corner of the grounds has been a chronic grievance with the manufacturers. In fact, as we intimated on several occasions last year, the Western Fair had reached a "critical stage"—in fact, a point where it either had to take a decided step in advance or "drop out of sight" in the circuit of great Canadian fairs. The Directors realized this thoroughly, and by their timely and vigorous action brought the needs of the Fair before the local municipal authorities and the people, being ably backed up by the city press. Strong resolutions in support of the movement were adopted by various organizations of breeders—the net result being, as stated above, the passage of the by-law. The next step will be the adoption of suitable plans for the removal of the old buildings and the erection of new ones during the coming season. With these improvements properly carried out, and a liberal revision of the live stock prize list, the Western Fair will greet exhibitors and visitors in most attractive style next fall, and which unquestionably will add greatly to its enduring popularity.

The number of months in a year a cow gives milk is largely a matter of habit. It is therefore important that a heifer's first milking period should be extended over fourteen or fifteen months. She should, therefore, be bred for the first time with that object in view.

The New Clerk of Forestry for Ontario.

Thomas Southworth, who was recently appointed by the Ontario Government to succeed the late Hon. C. F. Fraser as Clerk of Forestry, is a thorough Canadian—a native of the soil. He was born in 1855, in the County of Leeds, Ontario, and has been a continuous resident of that county until his removal to Toronto to assume the duties of his new position. Mr. Southworth's mother, Diantha Stoddard, was born in the same county; her parents, who migrated from Connecticut, having been among the pioneer settlers of Leeds. His father, Stephen J. Southworth, of Brockville, was a native of Vermont, but came to Canada over sixty years ago; he, like his wife, being of Puritan ancestry. The new Clerk of Forestry lived on his father's farm till it was sold in 1875, and the family removed to Brockville.

Mr. Southworth's schooling was obtained at the country school, in Kitley, and the High School, at Athens. After removing to Brockville, he was employed on the Brockville Recorder staff—finally as editorial writer. In 1879 he was married to Miss Mary Taylor (of Gananoque), sister to Geo. Taylor, M. P. for South Leeds, and in the following year embarked in the printing business. In 1881 his business was amalgamated with the Recorder, a partnership being formed between him and the late Col. David Wylie; since which time, till this year, the business, and most of the time the editorial management of the paper, was in his hands. From his early rural surroundings, as well as his newspaper career, he brings a fund of information which should prove of value to him in connection with the Forestry problem and the work of his office, which is naturally congenial to him as a studious observer of the conditions of national prosperity.

We take pleasure in giving elsewhere a contribution from Mr. Southworth's pen, dealing with the aim and scope of the Ontario Bureau of Forestry. While it has to do largely with the public domain, attention should not be allowed to flag regarding the subject of ordinary farm tree culture, such as the planting and care of trees for the sake of beautifying the farm, and as windbreaks, which become more and more necessary as the forests are yearly thinned out. As Mr. Southworth indicates, rapid progress is hardly to be expected in the growth of farm plantations for direct commercial results; but this subject will not be lost sight of by far-seeing men.

The Canadian Fat Cattle Trade—Some Practical Considerations.

SIR,—In looking over the live cattle trade back to the days when ocean freights were £5 to £7 per head for cattle, \$1.50 for fittings, and no insurance, we see that it took \$50 per head to cover expenses to Liverpool or London. Now you can ship at a cost not exceeding \$24, insured. In August, 1884, I shipped to London at \$19 per head, insured, and in November, 1885, I paid 35 shillings for ocean freight, and insured for 1 per cent; average per head, less than \$19. In November I shipped 100 head at 50 shillings, insured (to Liverpool); this lot cost a little over \$24 per head. The above covers all expenses from home. The August shipment (1884) sold at £18 per head; they averaged 1,350 pounds live weight at home, and netted \$4.75 per 100 pounds at home. The November lot netted \$3.75 live weight at home. The August shipment (1885) netted \$4.50. The above lots were sold on foot for so many pounds per head. Assuming them to dress 55 pounds to the 100 pounds live weight, the August (1884) lot brought about 11½ cents per pound, shrinking offal. (The November lot numbered in all 100 head.) I had 19 that had been weighed at home. The whole lot were sold to be dressed and weighed. Here are the prices: 4½d. for 12 head, 4½d. for 7 head, 4½d. for 52 head, 4½d. for 26 head, 4½d. for 3 head. I give the returns for the 19 head: Beef, 701 pounds average; total for beef, £251 16s. Hides, at 21s. each, £19 19s. Fat, 38 pounds each, at 2d., £6 2s. 2d. Offal, 16s. 6d. per head, £15 13s. 6d. Total sale, \$1,391; less expenses, \$24 each, \$456; netting at home 4 cents per pound live weight; dressing 53 pounds to the 100 pounds home weight; netting 11 cents for the beef shrinking offal. The offal of 100 head averaged \$10.60 per head. The live weight of the 100 head averaged from 1,250 to 1,275 pounds each. The ocean rates and number of days feeding before being sold and slaughtered, after cattle are landed, fixes the rate per head of expenses on each shipment. In London the butchers have full charge after purchase; in Liverpool they are not theirs until slaughtered and weighed—the shipper is very liable to be charged a six or eight days' feed bill, at one shilling per night for hay alone.

The question arises, Is there a better and cheaper method of handling our cattle? We know that it has been tried by Canadians, and was a failure. We know that Eastman & Co., New York, were engaged in the dressed meat trade a number of years ago, and we hear of great losses reported. We also know that Armour, Swift, and Morris are engaged in the dressed meat trade continuously, and when we consider for a moment their capacity for handling dressed meats, their vast capital, long experience, and the thorough system that they have in America and all over Europe, where their own men look after their interests daily, one would wonder why they send hundreds weekly of the finest live cattle that grace the English and Scottish markets! They must see some paying object in shipping live cattle. It also looks as though those

large operators, having access regularly to a market of 60,000 to 80,000 head of live cattle per week, can and will practically hold the dressed meat trade of Europe against any country not able (up to date) to export over 150,000 in any one year. I repeat again, that establishments with a staff of trained business men scattered all over Europe, and they reporting to the head office daily, are in a position that no small concern or company can compete with. Are we in a position to send dressed beef continuously the year around? I doubt it; and where would the plant for the purpose be established? Is it not an undeniable fact—I care not what the industry engaged in—that the success depends upon a continuous supply of the article or commodity produced, and its quality? I do not see how the dressed meat industry can control or secure our best finished cattle, especially from May until November, and it is during this season that our best cattle go forward. Again: the persistent efforts of the people of Australia to establish a live cattle trade show that they cannot be wholly satisfied with their dressed meat business. Then take the reports of refrigerator beef at London and Liverpool for a number of years through the months named—7 cents to 9 cents per pound for best—and I venture the statement, from a personal knowledge, that large quantities are sold at 6 cents and less; and can not the Chicago firms sell for the prices named, when they buy thousands of cattle weekly at 2½ to 3½ cents per pound? It is from cattle of this grade of prices that they furnish their customers with dressed beef in Europe. Their good cattle are sent alive. Take the lot I had in London, August 15th, 1884, that brought £18; they would dress 55 to the 100 pounds, or 742 pounds each, at 9 cents—\$60.78. Then say the offal is worth at Montreal \$9. Total, \$75.78. Deduct freight and shrinkage to Montreal, \$5, then \$10 for slaughtering, freight, and other selling charges—in all \$15 per head. We would have netted at home for the 1,350-pound steers \$60.78 each; that is, if the beef brought 9 cents per pound, which I much doubt. They realized at home \$64 as sold, showing \$3.22 in favor of live shipment, if I am correct as to costs of handling dressed beef.

It is stated that cattle are cruelly treated in transit. Yes, there is cruelty at times to an extreme degree in the treatment they get when being loaded and tied on board of ship. The inspectors appointed by the Government should do their duty, and put a stop to the unmerciful pounding that cattle are subjected to from the hands of men that I call hardly human. Outside of this one hour's ordeal, a competent foreman can land cattle without shrinking, as the ships are nearly all supplied with an abundance of pure fresh water (the shipper furnishes his own feed). In fact, I have landed cattle when I stated to my commission men that they never would weigh more on arrival than at starting, and I have landed them when I thought they had shrunk, but never did I land a lot but they looked better than they did leaving Montreal. After the cattle are landed at London or Liverpool, if you can feed cattle in a Canadian barn to gain, you can there. The lairage buildings are simply grand for cattle, with pure water before them. I landed Tuesday at 8 o'clock, p. m., and had them all tied up by 10 o'clock. On Thursday morning at 10 o'clock the market opened, and the cattle were in fine condition. When slaughtered, there was not fifty cents loss on the lot from bruises. Although a hard market, they realized four dollars per head more than they could have been sold for at home. And if my ocean freight had been 20 or 25 shillings per head, instead of 50 shillings, my cattle would have realized at least five dollars per head more. I had (or all Canadian cattle had) to compete against well-finished American steers, with a freight of 20 and 25 shillings per head, from New York and Boston. What the Canadian producer needs is fair competition in ocean rates.

As a producer, I will hail with satisfaction any new method that will permanently assist and benefit the cattle industry of Canada; but with the facts as indicated above before us, it would appear to me wisdom to see that our live cattle shipping facilities are the best possible, irrespective of any proposed opening of a dressed meat trade.

C. M. SIMMONS

No San Jose Scale in B. C.

SIR,—At a recent meeting of the Board of Horticulture, the reported presence of the San Jose Scale in British Columbia was brought up, and a resolution was passed to the effect that, after diligent inquiry, no such pest was found to exist in the Province, and I was asked to give publicity to the fact. Will you therefore be good enough to publish this communication, and oblige,

J. R. ANDERSON,
Deputy Minister of Agriculture.

Farming World (Edinburgh, Scotland): "There are, we repeat, hopeful signs for the future of British agriculture. If our farmers are given a 'fair field and no favor,' if they are united among themselves, if they are placed on an equality with the foreigner in the matter of railway rates, and if they take full advantage of the educational institutions now within their reach, they will yet cause to flourish the grandest and most ancient industry which the world has ever known."

THE FARMER'S ADVOCATE & HOME MAGAZINE

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

PUBLISHED BY THE WILLIAM WELD COMPANY (LIMITED), LONDON, ONT., and WINNIPEG, MAN.

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1. The Farmer's Advocate is published on the first and fifteenth of each month.
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12. Replies to circulars and letters of enquiry sent from this office will not be paid for as provided above.
13. No anonymous communications or enquiries will receive attention.

THE FARMER'S ADVOCATE, or THE WILLIAM WELD CO., LONDON, ONTARIO, CANADA.

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A Nova Scotia Farmers' Convention.

The Nova Scotia Farmers' Association will meet at Kentville, on Jan. 21, 22; addresses to be delivered by Prof. Robertson, President John B. McKay, Col. W. M. Blair, Prof. John Craig, Mr. J. E. Hopkins, Major Wm. Clark, Prof. Faville, Mr. Wm. Young, and others. Paul C. Black, Falmouth, N. S., is the Secretary. No evening session will be held the second day (22nd) in order to allow those who so desire to attend the Fruit Growers' Association at Wolfville.

Calamity Jane, of Brookbank Stock Farm.

Our frontispiece in this issue represents one of the sensational animals of 1895—the Holstein-Friesian cow Calamity Jane, the property of Messrs. A. & G. Rice, Currie's, Ont. In the dairy test at the recent Fat Stock and Dairy Show she headed, by an extraordinary lead, the list of competitors, capturing the FARMER'S ADVOCATE special prize of a beautiful marble clock, given for best pure-bred dairy cow. The test was conducted under the rules of the British Dairy Show. She gave in the twenty-four hours 69.18 pounds of milk, containing an average of 3.16 per cent. of fat, yielding 2.09 pounds of butter. She is just four years old. She gave, as a two-year-old, 46 pounds of milk in one day, and her dam's record is 64 pounds in twenty-four hours. Calamity Jane is a large, wedge-shaped cow, with excellent dairy points, and her performances at the pail demonstrate the value of the dairy form. As the illustration indicates, she has been de-horned, but that certainly did not prevent her being a great performer at the pail. Whether she would have made a more remarkable record with her horns on, it is, of course, impossible now to say.

The herd to which this phenomenal cow belongs is made up of many such cows as herself. They have been among the winners in dairy tests for a number of years. In the 1894 Toronto dairy test, cows of this herd won first and second prizes; the first winner being Eunice Clay, capturing the \$100 special award on that occasion. She is still in the herd and continues to be a great pail-filler of rich milk. During the past year, every public test in Ontario was entered, although in some instances by cows not in the best of condition, long in milk, etc. The result was, however, that third and fourth prizes were taken at Toronto, and in the Gananoque dairy test second prize was won in the cow class and second in the three-year-old class; one entry in the latter being 185 days in milk. At Guelph, the cow Calamity Jane was in proper condition, and did as already stated.

For a detailed description of the "Brookbank Farm" stock we refer our readers to a carefully written report in the FARMER'S ADVOCATE of Sept. 16th, 1895.

Messrs. Rice have recently made a new departure by putting in a creamery plant, for the purpose of private buttermaking. This step was rendered necessary owing to the enormous amount of milk obtained from the herd. The numerous calves are raised by the aid of the sweet skimmed milk, which is decidedly better for dairy heifers than whole milk would be. With such a herd of business and prize-winning pure-bred cows, these gentlemen have an extraordinary trade both in private creamery butter and in breeding stock. They well deserve the success which has attended their intelligent, steadfast and enterprising efforts.

Our Supply of "Home Queen" Volumes Exhausted—Other Premiums.

In several previous issues of the FARMER'S ADVOCATE we stated that our supply of "Home Queen" Cook Books was limited, and that only those who took prompt advantage of the offer could secure a copy of that excellent work. As promised, applications have been supplied in order of their receipt. Those reaching this office after the going out of the last copy can have their choice of other premiums offered for sending us one new subscriber; or by securing additional new names, their choice can be extended to other desirable premiums. Other premiums have been equally popular among the host of friends who have been doing missionary work for the ADVOCATE by extending its circulation, and at the same time for the cause of good farming throughout Canada. We are pleased to note that young Collie dogs have been earned in several quarters. "Canada's Glory," the new light horse premium, is in great demand, as it well deserves; and the new work on "Silage," by Prof. Woll, is being taken advantage of by large numbers of our readers by sending in new subscribers. Full particulars as to the contents of this book, and how it and other valuable premiums are to be obtained, may be read on another page.

It is gratifying to note the addition of large numbers of new subscribers to our list this season, despite the occasional talk about "hard times." One of the most effective means of overcoming hard times is to keep posted about one's own business by the regular study of the seasonable and practical matters with which our columns are filled from issue to issue.

During the winter days and evenings, at the Institute and other meeting, many favorable opportunities present themselves for obtaining new subscribers, which we trust our friends and agents will yet take advantage of, inviting their attention once more to our premium announcements.

The Late Wm Whitelaw.

It is with regret that we record the demise of an honored and successful farmer and stock breeder, the late Wm Whitelaw, who departed this life on Dec. 24 h, 1895, at the ripe age of four-score years.

The deceased was born in Merton, Scotland. He came to Canada in 1833, and for a number of years was employed as steward on the old line of Royal Mail steamers, sailing between Toronto and Montreal. In 1840 he found his way to Guelph, where he purchased of the late David Allan, the farm situated in Paisley Block, upon which he resided during the remainder of his life. His municipal record was an honorable one. He was Deputy-Reeve of Guelph Township in 1855, and Reeve from 1856 to 1862, and for the latter three years held the position of Warden of the County. Since retiring from municipal life, he was at various times appointed County Auditor, and held that position at the time of his death.

As a farmer he was very successful, especially in sheep husbandry, for which he had a special liking. He established a grand flock of Border Leicesters a good many years ago, by an importation from the Old Country, and by judicious additions and care kept the flock up to a high standard.

In private life, Mr. Whitelaw was a very warm friend and genial companion. He was energetic, impulsive, highly honorable in all his dealings; gifted with an unconquerable spirit, he overcame the difficulties of early life; and by the exercise of these qualities raised himself to an honorable position in the country, and commanded the respect and esteem of all who were brought in contact with him. He was always a member of the Presbyterian Church, and took an active interest in everything connected with his own congregation. He leaves behind five daughters and four sons: Mrs. Andrew Thompson, Garafra; Mrs. Jas. Muir, Eramosa; Alice, Helen, and Maggie, at home; Andrew, on the adjoining farm; George, in Guelph Township; William, at home; and Dr. Thomas, in Guelph.

Three brothers and a sister also survive him, viz.: Thomas, in Guelph; Robert and Andrew, in Woodstock; and Mrs. Aitchison, in Stratford.

The Bureau of Forestry.

BY THOMAS SOUTHWORTH, CLERK OF FORESTRY FOR ONTARIO.

Notwithstanding the amount of discussion devoted of late years to the subject of forestry, a good deal of misconception appears to exist in the public mind as to the real meaning of the term. Prejudices against scientific forestry are frequently met with even among well-informed people, and sometimes find expression in the press, which would disappear were its real principles and objects more clearly understood. The rash conclusions and extravagant statements of some of its more enthusiastic advocates are partly to blame for these false impressions, and in view of the exaggerated claims which have sometimes been made on its behalf, it is hardly surprising that many are disposed to regard it only as a more or less visionary scheme of controlling the rainfall and water supply by the planting of trees. Because the presence of large masses of trees tends to prevent too rapid evaporation of moisture from the soil and preserves an equable condition by checking the force of the drying winds and by ensuring the gradual flowing away of the melted snow and rainfall, and because of other more or less well defined effects of forests on agriculture, some enthusiasts have rushed to extremes and assumed that the rainfall was dependent on the presence of trees, and that, in consequence, deforestation was alone to blame for the lowering of the water in the Great Lakes and St. Lawrence River. Hence, all advocates of forestry have come to be regarded as cranks and their science as a fad.

Although much has been claimed for forestry that the facts may perhaps not warrant, scientific observations and experiments in Europe, as well as the history of once wooded and subsequently deforested countries, have proved that a due proportion of wooded to cleared land, properly distributed, is essential to the agricultural welfare of a country. So generally is this fact recognized in France and other European countries, that large sums are annually expended in restoring forests over extended areas.

Taken as a whole, the Province of Ontario, for example, has a far greater area of forest land than forestry requirements call for, but the course of settlement has interfered with its distribution, leaving much of the older settled part of the Province without a due proportion of trees. In much of this portion of Ontario the forests have been cleared away so thoroughly that we have got beyond the danger line, and reforestation to a considerable extent is desirable and necessary for our highest development as an agricultural country. The growing of woodland crops as a branch of farming operations is not attractive in this country, from a financial point of view, and does not appeal very strongly to the average farmer as a field for the investment of his money or his labor. The returns are very remote, compared with other crops; and, though the profits would be good in the case of some sort of trees, most men are reluctant to plant a crop they are not likely to reap, losing sight of the indirect profits in the way of benefit to their other crops and caring nothing for the benefit to

the community as a whole. This community value of forests is considerable, and for that reason it is the duty of the community, through its representative, the Government, to assist the individual in restoring to the part of the Province spoken of that proportion of forest land which experience has shown to be wisest. For that purpose, among others, the Bureau of Forestry has been created, and it will be its endeavor, with the assistance of the farmers and the press, to carry on this work.

Forestry, however, covers much broader ground than this. It means the raising, care and management of a crop of timber in a way that will promote the most rapid growth of the most valuable sorts. It means also the harvesting of this crop in a manner that will be as inexpensive as is consistent with the future reproduction and growth of similar crops on the same land. While striving for these ends, the forester will at the same time have due regard to the proper location of the crop as regards its effects on water supply and climate. To attain to the best results in this direction and to provide for a future supply of timber for the needs of the Province and for revenue, trees must be grown in larger masses than the limited areas that can be devoted to the purpose by individual owners will allow. Although it may be profitable for farmers to set aside part of their farms for the growing of woodland crops for timber, fuel, etc., the area of each farm devoted to this purpose must necessarily be confined to the less productive part of the land, and therefore but a small lot will, in most cases, be kept wooded. For this reason, forestry on any extended scale will be largely confined to lands not yet given up to settlement and still owned by the Crown. It is only a question of a few years when the scarcity of first-class timber in the United States will have caused a considerable advance in price of forest products. With the enhanced value of the finished product of the forest will come more careful and scientific methods of getting out the raw material. A forest is not a mine to be exploited with the idea of its ultimate exhaustion, but a crop that should, when harvested, be succeeded by recurring crops of similar vegetation. It is gratifying to know that the more progressive of our lumbermen have come to recognize the crop idea as the correct one, and are disposed to act in concert with the Crown Lands Department in a more rational management of the forests than formerly obtained or was possible during the early years of the lumbering industry. Until higher prices for lumber prevail here than are now obtainable, it will be impossible to adopt the very careful and minute methods of European forestry management, but we can adopt a less wasteful system of lumbering than has been followed in the past. As an instance of the more rational methods about to be followed, I might mention the ready adoption by the lumbermen of the Fire Ranging Act introduced by the Department of Crown Lands. By this Act a number of men are employed to protect the forests from fire, and the expense is met jointly by the Department and the lumbermen. It is hard to estimate the saving that has been effected by this, but it is very great, and is evidence that in this great industry, as in other lines of agricultural activity, Ontario will continue to be found in the van of progress on this Continent.

STOCK.

"Blue-Grays."

SIR,—The letter in your issue of 1st inst., page 4, signed "Onlooker," recommending the Ontario Agricultural College to undertake the production of a new breed of cattle, to be known as Blue-Grays or Canada's Polls, has the right ring about it. There is a vein in the letter to make it apparent that the writer has much more knowledge about the matter than he has obtained from reading alone. As an old breeder of Shorthorn and Galloway cattle, I should say that "Onlooker" possesses practical knowledge of the subject of a high experimental nature, or he would not recommend such a drastic cross as White Shorthorns on Galloway, and Galloway on White Shorthorns, which, to many breeders of Shorthorns, especially among American breeders who have followed the red craze even to the destruction of many a fine herd, would be viewed with horror. I would like "Onlooker" to give your readers his true name, for the subject, to my mind, is of great importance to Canada. I may say I am in entire accord with "Onlooker" in his remarks, which, did I know who was the writer, I would be disposed to think, by a friendly discussion of the subject from his pen, and others of experience, would be followed by Canada's Polls becoming a fact, and sought for by many other countries, including even the great "protectionist" country in breeding cattle—Great Britain. I hope "Onlooker" will favor your readers with more on this subject over his own name.

Toronto, Ont. WILLIAM KOUGH,
Breeder of World's Fair winning Galloways.

William Clark, P. E. Island:—"I thank you cordially for the answer to my query re sheep quarantine. It was all that could be wished for—much fuller than I expected. I must congratulate you on your December 16th issue. It was a splendid number."

The 2.10 List Up to Date.

The racing season of the light-harness horses is at an end, and although the champion records have not been broken, nor the two-minute performer made his appearance, the entries to the most select circle, the 2.10 list, are many and show a vast improvement in the breeding and handling of trotters and pacers. Just eleven years ago this circle only had two members, a trotter and a pacer, in Johnston, 2.06½, and Jay-Eye-See, 2.10. Since that time the list has steadily grown, until in 1895 it numbers 107 pacers and 46 trotters. There were fifty new pacers that entered this rank, while only fourteen trotters have joined their brethren. Of the forty-six trotters that have records of 2.10 or better, but four have beaten 2.06, while only one other has equaled that mark. Azote's 2.04½ is the fastest trotting mile of the year, and Beuzetta, 2.05½, is the fastest new comer to the list. Fifteen pacers have marks of 2.06 or better, and eleven of these have been better than 2.05; Robert J.'s 2.02 at Detroit being the best mile of the year for a harness horse. But six of the pacers already in the 2.10 list have reduced their records, while Azote is the only trotter that has taken anything from his previous mark.

Of the one hundred and fifty-two trotters and pacers that made themselves famous by making records of 2.10 or better, thirty-nine were bred in Kentucky, nineteen in California, ten in New York, seven in Iowa, seven in Tennessee; six each are to the credit of Illinois, Kansas, and Indiana; Pennsylvania, Oregon, Ohio, and Missouri have four each; Michigan has three; Wisconsin, Minnesota, Maine, Vermont, Washington, and Massachusetts have two each; while one stands to the credit of Montana, Colorado, Mississippi, Idaho, Arkansas, New Jersey, Texas, and Maryland. There are eight others in the list whose place of nativity is unknown.

In addition to the above large number of members to the most select circle of 2.10 performers, there are in the neighborhood of sixty others that are standing at the gate knocking for admittance with only a fraction of a second to wipe off before they too can take their positions among the fast ones. In this case, as in the other, the side-wheelers are considerably in the majority. With no bad luck to happen them, the season of 1896 will close with a large number of these "over the line," with 2.10 or better attached to their names.—*Kentucky Stock Farm.*

The Benefits of Grooming Cows.

Taking one dairy herd with another throughout the country, it is the exception rather than the rule to find the cows regularly curried or groomed; in fact, many cows would wonder what had happened should they be given a good combing down. Horses are largely groomed to give them appearance, but observing horsemen cannot have failed to notice the healthful benefits derived from keeping the skins of their animals clean and comfortable.

Horse-grooming is no more important than is cow-grooming; and, in fact, the latter is the more important during the winter season, when the cows are milking, for the reason that comfort is an important factor in milk secretion. Not only that, but absolute cleanliness in the dairy cannot exist without regular cow carding. It is an abominable fact that some people never enter a bath-tub during the winter months, and the reason that more of them do not fall victims to disease is largely due to the constant friction of their clothing against the skin to rub off the effete material that is being continually exuded from the blood through the pores. The cow's clothing does not act thus, but rather hinders the removal of the scurf and exudate, except she be fortunate enough to come in contact with the side of a strawstack, which is this season a rare article.

The skin of an animal is an active excreting agent, through the pores of which a large quantity of used-up matter is eliminated, most of which, if not removed, will dry on the skin, covering and clogging the numerous pores, and thus loading the system with blood poison. By the daily use of a stiff brush or currycomb the skin is kept in healthy tone, the animals are rendered comfortable, if other conditions are right, and scurf, filth and falling hair is prevented from finding its way into the milk pail. Very many dairymen now keep their cows tied continuously through the greater part of the winter, which makes regular and careful grooming all the more necessary; and what is true of dairy cows applies also to other cattle.

Using Up Worn-out Nags.

There is a firm in Philadelphia, Pa., which is said to be making good use of horse carcasses, of which very little, if any, part is allowed to go to waste. The hide goes into cordovan and leather slippers and driving-gloves, the tail and mane hair is made into haircloth, and the short hair of the body is used for stuffing cushions, etc. The hoofs go into oil and combs. Knife-handles are made out of the leg bones; and the head and ribs are burned into bone-black, after the glue has been extracted. By chemical processes the following compounds are prepared: Ammonium carbonate, potassium cyanide, prussic acid and phosphorus; besides these refined products obtained from the horse, considerable of the flesh is canned for human consumption.

Sheep vs. Dairy.

This is the way a Dakota farmer puts the comparative profitableness of sheep-rearing and dairying: "My neighbor last fall had seventeen ewes, and from these he this spring had twenty-nine lambs. He lost three lambs and one of the ewes, so now he has 26 lambs from 17 ewes, and he had 24 sheep to shear altogether, the wool from which brought him \$10.40. Now, you can estimate those lambs at the low figure of \$1.50 each this fall. Last fall, when sheep were lowest I ever knew them to be in this country, I paid \$28.90 for 16 spring lambs. Those 26 lambs at \$1.50 each would come to \$39; the wool from 24 sheep at \$10.40 makes a total of \$49.40. Now, those 17 ewes were worth about what two ordinary cows were worth last fall, and it takes an awful good dairy to average \$25 or \$35 a cow. Besides, you have got to milk nine months in the year, clean stables once a day and feed twice. That flock ran out without anything whatever except a little feed in the severest cold weather. And what that farmer did with those 24 sheep there is no farmer in South Dakota but can do equally as well with from 100 to 150 sheep."—*Farm, Stock and Home.*

Successful Sheep Breeding.

SIR,—The possibilities of the sheep industry have hardly yet, I think, been fully realized. Men, undoubtedly, have become expert in breeding lines where apathy and indifference held sway before. They have studied the requirements of the markets and shaped their course accordingly in breeding with a well defined purpose in view; intelligent practice in breeding, feeding, and otherwise caring for the flocks, have rescued the industry from what many have been pleased in past days to term its downfall, and brought it to a higher plane, in many respects, than it ever attained before.

The great diversity of soil and climate in every country calls for diversified practice in caring for the flocks, and a desideratum is the choice of breeds to suit the various localities. The first consideration is, which one of the breeds or grades of sheep will be the best for each individual farmer to stock his farm with? This opens up a broad subject, and it is one of the very highest importance to the farmer who hopes to make sheep raising a success.

Agriculture to-day is based upon broader foundations, in its relations to successful practice, than was formerly the case. We have reached the time of day in agriculture when brawn cannot be so nearly substituted for brains as in the primitive days of farming. Strong hands are still needed, but the active mind and intelligent brain count for more in modern success on the farm. Our stock-growing interests call for the wisest thought and consideration to adapt it to special lines, and with no class of farm animals does the principle apply with more force than to the successful breeding of sheep to meet the requirements of the changed conditions of the sheep industry.

The first consideration, then, is to ascertain a breed of sheep adapted to the soil and climate where we are situated. This, I consider, is the first essential requisite in successful sheep farming, and the ignoring of which has often been attended with financial disaster. And, again, an adaptation to the requirements of the breeder. One thing which has been shown quite conspicuously recently, as I have studied the sheep industry from the standpoint of the farmer, and as seen in the varied practice of individuals who present the best of their flocks at an exhibition or show, is that some of the best sheep have been either pure breeds or have been remarkably well graded up. When you come to figure for a class of sheep suited to a wide variety of soil and climate, the medium sized breeds, I think, come nearer to filling the bill than any other. This is on account of the hardiness and the readiness with which they adapt themselves to their surroundings.

The hardiness of a breed or class of sheep is another important requisite in all fickle and trying climates. The selection of ewes for breeding cannot be to carefully done. Size in an ewe is one of the first considerations, if other points are in keeping. An undersized ewe will, as a rule, produce a small sized lamb, although if such a ewe has a good form, broad, thick shoulders for her size; straight, broad back; a thick fleece that will shed water readily; roomy body and deep through the loins; square buttock, and belly well covered with wool; such a ewe with a clean nose at two or more years of age, although somewhat undersized, is far preferable to one 25 pounds heavier, but of the thin-shouldered, roach-backed, scantily-clothed, tucked-

up kind. The latter sort is unfit for breeding purposes, and all such should be weeded out of the flock, and, if possible, fattened for the butcher.

The fall or early winter is an opportune time to look over the flock of ewes and cull out the inferior animals, of which there will always be a few, with the most careful management, from one cause or another. If a yearling ewe is at all undersized, and in good order, the chances are that she will turn to better account on the block than to keep her for breeding purposes.

A requisite in lambs is that they early attain good size, whether yeaned in February or August. A good sized, vigorous ewe, coupled with a mature, hardy ram of the right type, should drop at least one vigorous lamb, which, given a good chance, will thrive and grow from the day he is dropped till turned to the butcher.

While Merino blood is slow in respect to maturing, it is hardy and vigorous; hence, Australian, and to some extent, American, sheepmen have found that good grade ewes, tintured with a dash of Merino blood, make good mothers and drop vigorous lambs when coupled with a ram of most long-wooled English breeds. While profits from most lines of farming are on a lower level than formerly, the change in sheep products, with the improvement in breeding for the purpose to suit the line of marketable products, places sheep growing on a full par with other lines of husbandry.

Then, the breeder must use every care in the choice of his rams. These must be purely bred, as a sure guarantee of ability to transmit their own qualities. Never bring a ram lacking in good, sound characteristics into a flock. He should possess a massive breast, excellent heart and flank girth, and, withal, a bold, bright eye and gay carriage, to indicate the possession of marked vigor and stamina. Such an animal can scarcely fail to be prepotent; but if, when proved, he is found lacking in prepotency, the eye should not pity nor the hand spare. No man can possibly make a success of breeding sheep who is not skillful in the selection of his rams. It has been frequently stated that the ram is half the flock. To speak thus is only to tell a half truth, for he is as much more than the half of the flock as his prepotency exceeds that of the average female with which he is mated.

Bradford, Eng.

As Viewed from a British Standpoint.

The *Scottish Farmer*, a strenuous opponent of the free admission into Great Britain of Canadian live stock, appears to regard with more satisfaction the proposal to establish a Canadian dressed-meat trade, judged by the following, which appears in its last issue:—

"Professor Robertson, the chief agricultural organizer of the Canadian Government, is a long-headed Scotchman; he recognizes the wants of the times, and resolutely sets himself to supply them. At the congress held during the Christmas [Ontario Fat Stock] show week he unfolded a scheme for supplying wholesome food to the British market, with which no one will be able to quarrel. The keynote of his scheme is—Britain for the British; Canada is part of the United Kingdom; better is it for the mother country to get her food supplies from her own children than from strangers. So say we all. The aim of the Professor—and the Dominion Government will back him—is to make the cattle trade between Great Britain and Canada a dead-meat trade. He recognizes that the ports of this country are irrevocably closed to live cattle and sheep. He therefore calls upon the Canadian farmer to supply the mother country with dead meat, which will be chilled, not frozen. He proposes that, in order to make a demand for this meat, the Government of the Dominion begin by slaughtering 500 cattle per week at Montreal and shipping the chilled carcasses to the chief British ports, in which shops will be opened for the sale of Canadian meat and nothing else. Believing that the quality is first-class, Professor Robertson means to sell it on its own merits, and thereby create a demand for Canadian beef such as now exists for Danish butter. As we cannot feed our population ourselves, no fairer or more worthy method of supplementing our efforts than that now outlined has ever been devised."

The English *Live Stock Journal* is non-committal, but is evidently surprised that mutton is not specially mentioned in the proposed Canadian project.

Round Silo Construction.

We have just received an interesting letter describing in detail how one of our readers last season built a successful round silo 25 feet deep, from 2x6-inch tamarac staves, filling it with *wheat* ensilage. It will appear in next issue.

The order of the British Board of Agriculture, in reference to the importation of sheep, came into force on Wednesday, January 1st, 1896. All foreign sheep must now be slaughtered at ports of landing in Britain.

FARM.

Interesting Point in Silo Wall Construction.

SIR.—I read in your last issue a description of the cement concrete walls, floors and silos built by Mr. Daniel McIntyre, of Ayon, Ont. I know that you are anxious to give the farmers of this country the best possible information through your columns. The article states that the walls are plumb inside. I was present when Mr. McIntyre's walls were laid out, and I know that I gave instructions that the walls of the silos should overhang to the inside just a little, say about one inch in twenty-five feet, as a slight relief to the lateral pressure to which silo walls are subjected as the contents heat and settle. Then when the inside of silo is finished with a fine putty coat of cement, and troweled perfectly hard and smooth, there is no chance for the ensilage to bind to the walls, and it must settle solid. During the past two years we have built a large number of silos in different parts of Ontario. We have heard from nearly all of them, and they keep ensilage perfectly, and we think better not to change the plans we have adopted so long as they are satisfactory. Now that the value of corn for feeding stock is becoming understood, it is important that the best means of taking care of this valuable feed should be understood and adopted. Very often the ensilage is too dry when put in the silo; water should then be used. It causes the ensilage to settle firmer, and, no doubt, the harder the ensilage is packed the better it will keep. It would be very beneficial to all if farmers who have silos would give their experience through the *ADVOCATE* on such matters, so that the very best results may be obtained. During the past three years I have spent all my time amongst farmers, and purpose so doing for some time yet. I am anxious to get the very best data I can, and will be glad at any time to give to or receive from readers of the *ADVOCATE* any useful information.

Thorold, Ont., Jan. 9th.

ISAAC USHER.

Hydraulic Rams.

SIR.—In the *ADVOCATE* of January 1st, Mr. R. C. Allen gives some information with regard to the working of hydraulic rams. Some of his points are good as far as they go, but I fear they might have a tendency to mislead persons who do not know anything practically about the working of hydraulic pumping machines. We have a hydraulic ram working on our farm at the present time, and truly where they can be operated they are a great boon; and there are many such places. How many farms there are with a running stream or spring within, say, one mile of the farm buildings. Many people have the idea that they are suitable for pumping water only a very short distance. That is a mistake. You can force water practically any distance, say a mile or so, if you have the head of water. We have both a windmill and ram; and if we could work a ram where we have the windmill, the windmill would soon have to go. The cost of a ram is comparatively small. The main expense is the piping, and that depends on the distance you wish to pump. Many persons have springs of running water that would probably not be strong enough to drive a ram, but would furnish plenty of water for use. If such is the case, and there is a river, creek, or any other stream, the water of which may be impure, it can be utilized to drive the ram to pump up the pure water. However, a stream or spring yielding from 6,000 to 12,000 gallons per 24 hours is sufficient to work one of the smallest sizes. This is a very small stream of water. Of course the larger the stream the larger size of ram, consequently a larger stream of water delivered. Ordinary rams are supposed to elevate about one-seventh of the water that runs through them ten feet high for every foot of a fall there is from the top end of the feed-pipe in the spring to the ram. They will elevate a smaller quantity higher than that, however. Our ram is pumping 500 gallons per day thirteen feet high for every foot of a fall in drive-pipe. There is an American ram made that will elevate 25 feet high for every foot of fall in drive-pipe. You will see the importance of making good use of what fall there is, and not wasting any of the power. Mr. Allen advises in his illustration the use of a tile drain to convey the water from the dam or head to a supply barrel which is to feed the ram. Now, where the fall is none too great this is most decidedly a mistake; and if you have plenty of fall, it is altogether unnecessary. Those tiles must have a certain amount of fall, which will make the supply barrel that much lower than the dam.



The accompanying diagram illustrates how ours is set, which I feel sure is a much better way. "A" represents the old bottom of the stream. To get the fall for the ram we started down the stream at "F" and dug the bottom of the creek out, on a water level nearly. "B" represents the present bottom of stream. "D" is a dam built to get head or depth of water to put end of feed pipe into. "H," discharge running to tank. "E," feed pipe. "C," ram. The dam ("D") may be built as high as possible to increase the head. The ram ("E") may be set down at least six inches into the water. If you

have a stream of spring water, as ours is, there will be no danger of frost; the constant running of the water through the pipes will prevent freezing. We just turn an empty salt-barrel upside down on the top of our ram to prevent anything falling in on it; the pipes are not over a foot and a-half in the ground in some places. The ground becomes frozen solid all around the pipe, but it never freezes, on account of the steady running stream of pumped water. However, I would not advise everybody to put in their pipes that near the surface, as there is liable to be an accident—something might go wrong with the ram in cold weather and the pipes become frozen before being started again. The size of the feed ("E") depends on the size of the ram; we have a two-inch pipe. Some would want larger, some smaller. The length of feed-pipe has considerable to do with the power of the ram. After you get your feed-pipe over a certain length you lose power on account of the extra friction of the water running down the pipe. Of course no set rule can be laid down as to the length of the feed-pipe; circumstances alters cases, but in most cases 50 feet is too long. We have a drive-pipe 35 feet long, and the longer we make the feed-pipe over that the less water we have delivered at the barn.

Any person who can operate a hydraulic ram should have model waterworks, namely, running water at his buildings. It would be folly to be bothered with wells and cisterns, pumps, ect., which require constant attention. The ram is master of the situation. It is so simple and durable, nothing scarcely to go wrong; no oiling required. It works away day and night, week in and week out, from the beginning of the year to the end of it; through rain or shine, through calm and storm it keeps working away, supplying a constant stream of fresh water.

JOHN TAYLOR, JR.

Waterloo Co., Ont.

Winter Manuring.

I shall, as briefly as possible, give your readers my experience in winter manuring and some of the advantages to be derived from it. If it is profitable for one man to do it, it must be profitable for every farmer under the same conditions. We hear so much of the hard times among the farmers, and no wonder, when much that could be turned into a profit is allowed to go to loss, and then so much work is done to a disadvantage.

We draw out our manure every few days or once a week, and in the beginning of winter, when the snow is shallow and the roads are good, draw to the farthest fields, and then in deep and drifting snow to the nearest. We use a wooden sled, or jumper, made purposely, having its runners one or two feet farther apart than usual, and low, as a great deal of energy is saved by putting it on a low sleigh compared with a high wagon-box. We have never found any difficulty with the heaps freezing in the yard in the few days it was allowed to stand, as we have used considerable straw for bedding when straw was cheap, but when it is scarce, as it has been this fall and winter, we have used wood-dust and dry muck, which we had stored away in summer. If the manure freezes we take a common railroad pick and loosen it up, and it will handle as rapidly as in any other way. There may be lumps among it, but we go over the ground again in the spring with forks to scatter out any hard lumps.

We find no objections to putting strawy manure on the meadow, as hard, worn-out clay requires a complete covering, and with a little care in raking the hay can be gathered and the straw left as a covering. We manured a meadow field last winter with very strawy manure, raked it with a horse-rake by being careful, and had twice as much hay as the former year, although it was no better year for meadows, and so we have really gained one crop of hay, for we wouldn't have had that extra crop till the following year had we put it on in the summer. We prefer putting the manure on hay or pasture rather than plowing under, as the worn-out land needs something to keep it covered from the action of the sun and to keep it moist in time of drought. We are this winter manuring a plowed field which we intend seeding in the spring. This will ensure a good catch of grass, we think. The manure that we think is not too strawy to bother a cultivator goes on the plowing and the rest on the meadow or pasture. Where snow is deep we have learned that it is best to put in small heaps rather than to spread. This saves leakage when the snow is melting from under it in spring. We tried large heaps of several loads one year, but found that it had to be scattered with horses, but we could not get them on the field till the grass had started, and it was damaged thereby. The scattering of horse manure as it is made does away with the heating, which, if permitted, will lessen its value very materially.

As one's time in winter is not nearly so valuable as in summer, he can do much of the summer's work in this way when he has very little else to do but choring; and the horses are saved this extra hard work in summer by doing it when they need something for exercise, thus putting their exercise to practical use. Then there is a great deal of labor saved by not having to pitch from the stables over large heaps all winter or wheeling away in a barrow, and you have the comfort of a clean yard with the extra room it gives, which is considerable. This does away with the necessity of building manure sheds. The wear and tear on a sleigh is nothing to be compared to that of a wagon, and then you are in no danger of cutting up the fields, as is often the case with the wheels.

Douglas, Ont.

Economy in Feeding.

SIR.—There is not, perhaps, one year in twenty that the Ontario farmer needs to economize in feeding stock as it is necessary for him to do this winter. I look upon the proper use of the cutting box (or straw cutter) as the corner-stone of economy in feeding; not that it adds anything to good feed, but that a great deal of coarse fodder will be eaten, if cut and mixed with good hay, cornstalks, green oats, etc., that would very largely be wasted in the ordinary way of feeding.

My plan is to cut about two weeks' supply at once: a mixture of one part hay, two parts straw, three parts fodder corn; at the same time I mix in the heap a quantity of mill-stuffs, such as oat dust, pea bran, wheat bran, etc., according to what I am feeding for. This is fed to cows, horses and sheep, all they will clean up. If feeding chop in connection, I mix it with the cut feed as it is fed. Mixing the mill-stuffs through the heap takes up the moisture from the corn, not only preventing the corn from heating, but making it moist enough to cause it to stick to the straw and give it a mealy flavor. I also strongly believe in grinding or crushing all grain fed to stock (excepting sheep). While I pulp roots for the stock, I do not mix them with the cut feed a meal or two ahead, as some do, for fear of giving the milk a turnip flavor; there is no danger of this when turnips are fed after milking, in reasonable quantities.

R. H. HARDING.

Middlesex Co., Ont.

Name the Farm.

It has been frequently suggested that great good would result from each farmer placing his name and the name of his farm in a conspicuous place on his barn or road-gate. Not only would persons driving for the first time to the place more easily find it, but it would add much pleasure and interest to people driving from place to place. This latter result would have especial effect with regard to well-kept and pretty homes. An observing person will seldom pass a beautiful farm steading without a desire to know who is its enterprising owner. If such a practice were general a marked improvement in the appearance of our farms, and therefore of our country, could not fail to result. Every tidy man would feel a heightened interest in making his farm-front, roadsides, etc., more beautiful, knowing that every passer-by would commend him as the owner. It would also have a good effect upon the untidy man's farm, because the contrast between his slovenly place and his neighbor's well-kept home would shame him into fence repairing, tree planting, and other lines of improvement. The idea of naming the farm is certainly commendable. Would not the above be a suitable topic for farmers' clubs to discuss this coming winter?

New and Old Process Oil Meal.

The difference between the "new" and "old" process of extracting linseed oil from the ground seed is that by the "old process" the oil is expressed by pressure, and with the "new process" ethers are used which completely extract it. It will therefore be seen that the "old" is much more nutritious than the "new," because of the extra oil contained. When oil cake is being fed to narrow up a nutritive ratio, the "new process" food should be the sort taken, but if, on the other hand, it is desired to add fat to some extent and albuminoids to a large extent, then the "old" will better accomplish the desired purpose.

DAIRY.

Successful Dairy Conventions.

The nineteenth annual convention of the Western Ontario Dairymen's Association, held in Woodstock on Jan. 7, 8 and 9, was by all odds the most successful ever held in the history of the Association. It was feared by members of the Association that the convention of 1896 would not come up to the meeting of 1895, held in Stratford; but when at some of the day sessions of the recent meeting about 1,000 persons were in attendance, we cannot but conclude that the past season's decreased factory returns have had the effect of making patrons, makers and buyers more eager than ever to come together to teach and learn how further to improve their methods and increase their profits. One of the best evidences of the popularity of these conventions is the fact that very many of the same faces are seen in the audience from year to year. Dairymen who once attend these gatherings realize that they cannot afford to miss their advantage, and therefore return year after year, bringing friends with them; hence the steady and substantial growth. We predicted in last issue that this would be a great convention, and that practical instruction by practical men would be the order of the various sessions. Those who were present realized that we were not over-sanguine in that prediction. Woodstock proved to be peculiarly suited to such a meeting: its central position, its ample accommodation, its genial citizens, all conduced to the successful issue realized. Its Board of Trade, whose President is A. J. McIntosh; 1st Vice-President, Major S. J. Cole, and 2nd Vice-President, Mr. Andrew Pattullo (who is now Past President of the Dairy Association), provided a most suitable meeting-hall, and at the close of the convention banqueted in a royal manner the visiting delegates. At the banquet were present many notable person-

ages and eloquent speakers. We may mention of these, Sir Oliver Mowat, who in his remarks referred to a few of the advances that have characterized the agricultural and dairy industries during the years of his easy recollection. It was not long since, he remarked, that nearly all the cheese consumed in Canada was of American manufacture, with an occasional, but very expensive, lot from England. He also remarked that good butter of those days would be considered very poor now, and average quality then would not now be eaten at all as butter. In referring to the advance in agriculture, Sir Oliver cited a couple of instances that came before his notice: "An extensive distiller who fed large numbers of cattle and hogs, after using as much manure on his own land as was wise, had to float great quantities down the river, because he could not induce neighboring farmers to come and haul it upon their land free of charge." Another instance was given "of an extensive farmer who, on returning home from a few days' absence, discovered that his hired man had actually injured one of his fields by giving it a coat of yard manure. So furious became the injured agriculturist that he only became pacified when the offending culprit signed an agreement to restore in money the loss sustained in the following crop because of the baneful dressing."

Our American cousins, Messrs. John Gould and Theodore Lewis, did grand service in dealing with many knotty problems in the breeding, feeding, and especially the care of hogs and dairy cows. Many other notable speakers were present and contributed to the menu of information.

The address of the retiring President, Mr. Andrew Pattullo, was an able review of the important features of the work. He touched upon the necessity of co-operative effort to improve the quality rather than increase the production. The past season's low prices teach this lesson. The "call board" system was referred to in much the same manner as Mr. Pearce dealt with it in his paper subsequently. Mr. Pattullo advocated putting first-class cheese on the home market, so as to increase the home demand for Cheddar cheese. With reference to the work of the Governments, the President considered that a point has been reached where there should be a clearer understanding as to the sphere of duty, the area of work, for the Federal and Provincial Departments and officials that are connected with the dairy industry, as they seem in some directions to be overlapping each other, if their efforts are not positively antagonistic. Work which in one Province is being done by local enterprise and activity is being done through Federal effort and with national funds in another. There should be no difficulty in all the agencies which make for progress and which have for their common object the improvement in the quality of Canadian cheese and its reputation in the markets of the world, uniting and working in harmony side by side. This can only be done, and obvious difficulties and dangers avoided, by Federal and Provincial activity being each confined to its own sphere.

Secretary Wheaton's report was an admirable review of the important work carried on by the Association during the year. He reported an average of 83 patrons and 526 cows per factory. The largest amount of money received by any patron per cow for 1894 was \$65; lowest, \$6; average \$23.54; which was \$2.51 less than in 1895. Fewer factories used the Babcock test last year, mainly on account of the expense. Although it was only just that the maker should receive pay for the extra work, Mr. Wheaton was of opinion that it would pay the maker to do the work gratis, rather than discontinue the system which would insure him milk of so much better quality and had so many other substantial advantages. If factories would adopt the test system, the Association would be relieved of the disagreeable work of inspection and prosecution, devoting their energies altogether to instruction. Too many factories (77 per cent.) still return the whey in the cans to the patrons. Mr. Wheaton quoted figures to show that, everything considered, where the whey was not returned patrons would receive as much, if not more, value than in having the whey returned, and would not run the risk of injuring the cheese flavor. The average cost of hauling at the factories where the whey is, not returned was 63.5 cents per 100 pounds of milk, while the average cost where the whey was returned was 83.10, a difference of nearly 2 cents per 100 pounds, or about 25 per cent. less. Mr. Wheaton also called attention to the plan proposed for securing greater uniformity in cheese, as outlined in the *Advocate* for Nov. 15th, 1895, citing the success attending the syndicate system of instruction, etc., in Quebec.

"Cheese Markets and the Best Methods of Operating Them" was the title of a paper read by J. S. Pearce, London. The "call board" system, which was introduced in 1892, and successfully operated for a short time, has now degenerated into a farce. It has, during the last season, been largely used by salesmen as a "feeler" to the markets. A close observation of the doings of the London market showed that 71 factories boarded cheese during the season. There were 136 sales made at the 29 markets held; 11 factories made no sales, 20 made one sale each, 20 made two sales each, 11 made three sales, 11 made four, 3 made five sales each during the season. One factory boarded cheese 21 times and made one sale, two factories boarded cheese 15 times, five factories 13, etc. This is an example of the present manipulation of the "call

board" system of selling cheese. As a remedy, Mr. Pearce recommended the forming of syndicates or groups of 15 or 20 factories, having one seller, who would only board cheese when they are ready to ship, and agree to sell when boarded on the board, and nowhere else. Such a method would change a great deal of jealous competition between local factories into co-operation and harmony; it would save expense in selling, and avoid the crossing and overlapping of milk-wagon routes. Cheese would be sold in larger lots; the cheese would leave the curing room and return its value in cash to the patrons as soon as it became fit, and buyers would more readily bid upon large than smaller quantities. During the discussion many speakers agreed that such a practice would result in a higher average price throughout the season.

A resolution was unanimously carried, to the effect that the easiest and most feasible plan to bring about a reform, and thus to promote the interests of the producer, would be for the salesmen on each market to agree to sell their cheese on the call board whenever they register there, and not to sell them off the board; and the directors were requested to make an effort to bring about an agreement to that effect on the various markets.

A resolution of regret in connection with the death of the late J. B. Harris, and sympathy with the family, was placed on record.

Carrying Whey in the Milk Cans.—The directors in their report said that they deplored the far too prevalent custom of sending back whey in the milk cans, and recommended that some means be devised to do away with the practice. It was claimed by several of the buyers that continued success in the dairy industry can only result by improving the quality of cheese, and not by increasing the quantity. A resolution was carried unanimously endorsing the views expressed by the directors on the subject of carrying whey in the milk cans, and the members pledged themselves to use their utmost efforts to influence their fellow patrons and factory directors to put a stop to a practice which is dangerous to the interests of the cheese industry, and which prevents the uniform improvement towards a high standard of quality, which it is the aim of these conventions and the work of this Association to promote. The Association directors are asked also to co-operate in that direction.

The Fat of Milk.—Prof. H. H. Dean, by the aid of charts, dealt with the question of fat in its relation to the value of milk for cheesemaking, giving in substance the same as his article contained elsewhere in this issue. The discussion which followed brought out many points in favor of paying for milk according to its fat, as shown by the Babcock test. The following resolution was passed by the convention: "That the Association favor the system of paying for milk according to quality, and that the Babcock tester affords a just and honest test of quality. We urge its universal use throughout the factories of the Western district, believing that it will promote both honesty and improvement among patrons, and enhance the quality of our cheese."

Inspection.—The report of Inspector T. B. Millar showed that good work had been done, but that he had not been able to do all the necessary work. It was therefore resolved,—That the members of the Association cordially endorse a recommendation made by the directors in favor of increased inspection and instruction among the factories through co-operative effort, and promise to support the directors of the present year in such steps as they may see fit to take in order to carry out such a policy.

Branding Cheese.—Prof. J. W. Robertson, in an address on "The Food Products of Ontario," recommended the branding of cheese. The practice was also approved by the Hon. Thos. Ballantyne. This action seems peculiarly applicable at this juncture, following the report circulated in England that "filled" cheese had been received from Canada, and also for the reason that the Canadian reputation would always receive recognition if every Canadian cheese bore a stencilled brand. It was therefore resolved,—That this convention strongly recommend that such regulations be adopted, and such laws be enacted as will compel our cheese factories to brand on each cheese the day and month upon which the cheese was made, and also the word "Canada." The suggestion that each factory should have a registered number was not approved.

Other papers, addresses and discussions will be reported in our next issue.

Election of Officers.—Honorary President, Hon. T. Ballantyne, Stratford; President, A. F. MacLaren, Stratford; First Vice-President, J. S. Pearce, London; Second Vice-President, Harold Eagle, Attercliffe Station. Directors—John Prain, Hariston; J. N. Paget, Canboro; A. Pattullo, Woodstock; Thos. Gibson, Fordwich; R. M. Ballantyne, Stratford; J. W. Symington, Camlachie; H. White, Hawkesville. Toronto Fair Delegate, J. W. Wheaton, London; Western Fair Delegates, Jno. Gilmore, Nilestown, and R. Robertson, London. Auditors—J. A. Nelles and Jno. Geary, London.

THE EASTERN ASSOCIATION.

The Eastern Ontario Dairymen's Association meeting, held at Campbellford, though not so largely attended as the Western meeting, was a decided success, some 300 being present at the Thursday afternoon session, about 40 taking part in the discussions. President Kidd took a hopeful view of next season's cheese prospects. He said that over half of the cheese now imported by Britain was

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Prof. dresses evening interest and on Address Prof. D. structor and other

The President President Wm. E. John R. man's C. tors—M. Gower.

Quality Poor

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from Canada, and for the future quality must be its strong point. He urged corn growing both for green feed and the silo. Mr. D. Derbyshire, of Brockville, President of the Ontario Creamery Association, predicted higher prices for cheese next season. Inspectors Purvis, Grant, and Eager all spoke strongly in favor of the use of the Babcock tester in paying for milk for cheesemaking. Out of 27 factories in Mr. Eager's district, 25 use the tester, and paid for the milk by fat percentage. An interesting feature of the convention was the spirited debate between Prof. Dean and Prof. Robertson re the "straight butter-fat" and the "two per cent." plans of paying for milk.

Prof. Fletcher, of Ottawa, gave instructive addresses on "Grasses," "The Horn-fly," and at an evening session on "House Plants," giving also an interesting account of his trip to the Pacific Coast, and on the closing day dealt with insect pests. Addresses were also given by Hon. John Dryden, Prof. Dean, Prof. Robertson, John Gould, Instructor Peblow, Mr. Jas. Whitton, S. L. Owen, and others.

The election of officers resulted as follows:—President, Henry Wade, Toronto; First Vice-President, E. J. Madden, Newburg; Second Vice-President, John McLavish, Vancamp; Directors—Wm. Eager, Morrisburg; E. Kidd, North Gower; John R. Dargavel, Elgin; James Whitton, Wellman's Corners; T. B. Carlaw, Warkworth. Auditors—Morden Bird, Stirling; R. R. Craig, North Gower.

Quality of Cheese Produced from Rich and Poor Milk in the Experiments made at the O. A. C. Dairy.

SIR,—According to promise, I submit the results of the "crucial point"—quality—in our experimental cheese up to date. The November and December cheese have not yet been judged, consequently they cannot be reported upon at present. I would say at the outset that I approach this subject of "quality" with a good deal of diffidence, largely for two reasons:—

1. Because of the great indefiniteness of what is meant by the term "quality" in cheese, and of the lack of uniformity in opinion as to what goes to make up this vague term "quality." I venture to assert that if six or more of the best judges of cheese in Canada, the United States or Great Britain were to come to the Experimental Dairy of the Ontario Agricultural College and score the cheese now on the shelves, there would be as many different results as to the "quality" of the cheese as there were judges of the same. In the first place, no two of them are likely to agree on a scale of points to be used. If space and time permitted, I am confident that I could give the readers of the ADVOCATE ten or twelve scales for judging cheese which have been used and which are still recommended by so-called experts. Then, again, tastes and markets differ. What one person would call a good cheese others would not like at all. Talking with a member of a Liverpool firm, who was in Toronto on December 31st, 1895, on the question of the wants of the cheese markets in Great Britain, he said, "Why, we have nine or ten distinct classes of customers to cater for. Some like a soft, moist cheese. Others want a firm cheese. Others want colored cheese; and some want cheese without any coloring. Some like mild cheese and some like sharp cheese, and so on. We have to cater to the tastes of our customers, as it is useless to try to convert a Britisher's tastes. This is a hopeless task."

If there is any man living who can tell us definitely just what is meant by "quality" in a cheese, and who would set up a standard for the world, the writer would like to see that person—and so would many others.

2. Another reason why the writer is backward about approaching this question is that there are so many things which influence the "quality" of cheese, between the food given to the cow and the cheese as finally placed before the consumer, that he is a bold man who will stand up and say that any one factor is the controlling element in the manufacture of fine Canadian cheddar cheese.

Allow me to give a few illustrations on this point—not theoretical, but actual experiences in connection with our experimental work this past season. To commence at the beginning: One of the persons from whom we bought milk commenced to feed some brewers' grains during my absence this past summer. Our maker did not know what was the matter with the milk for some time, as he had never experienced such a peculiar flavor before. A visit to the farm finally revealed the cause of the trouble. After my return on the 12th of September, the feeding of these grains was stopped, but the flavor continued through almost the whole remaining portion of the month.

Several times during the season we had gassy curds and fast workers. Sometimes they were found in curds from rich milk and sometimes in the curds from poor milk. These things influenced the "quality" of the cheese. I shall mention but one or two more. We have found that salt is a very important factor in the making of cheese. In some experiments on the effects of salt on curds, we divided the curd at salting time, and to one part we applied the usual amount, while to the other we applied various amounts varying from one-quarter of a pound to three and a-half pounds of salt per 100 pounds of curd. The small amount of salt

produced a cheese weak and soft in body and texture, while the flavor was insipid—as much unlike the other portion of the curd properly salted as one could imagine. Too much salt made a cheese hard and dry, that no one likes. Lastly, the skill and good judgment of the worker have a marked influence on the "quality" of cheese. It requires a nice combination of skill and sound judgment, good milk, proper utensils and proper agents (rennet, salt, etc.) in order to make fancy cheese.

Leaving out all contingencies, and taking the cheese as we find them (except for September, 1895, on account of the flavor from brewers' grains), the table shows the scoring for the past two years up to date. In addition, the scoring for October, 1895, is given separately, as these cheese were scored by Mr. Alex. MacLaren, of Stratford (the only man in the world who can score cheese to half a point), and Mr. A. T. Bell, of Tavistock. (For the monthly scoring of all the cheese, I would refer readers to the College Report for 1895, which will be published shortly.) The cheese were all scored, when about one month old, by a number of experts, among whom were Messrs. MacLaren, Bell, R. M. Ballantyne, and Brill (of Guelph), on the following scale:—

Flavor	35
Closeness	20
Even color	15
Texture	20
Finish	10
Total	100

All cheese were given full points for finish. We thought that the judges were somewhat severe at times in their scorings. One judge remarked that if they gave the cheese full points we were not likely to make any improvements, so we endeavored to take their judgments with good grace.

The "possible score" in flavor is got by multiplying the number of cheese judged by the points given for flavor; e. g., 43 experiments in 1894 would make a possible score of 43 x 35 = 1,505 for flavor; 43 x 20 = 860 for closeness; 43 x 15 = 645 for even color, and so on. The "points scored" is got by adding together the total points given by the judges for flavor, closeness, etc., in all the cheese made. No doubt the work might have been done differently, and readers may be able to suggest improvements for 1896. These, if practicable, will be acted upon so far as possible. We invite suggestions, as our aim is not to set up any theory of our own and make our experiments conform to that, but to know the truth in these matters, and to allow theories to go to the dogs, if they are not consistent with practical results.

Table showing the score of the experimental cheese for 1894, the month of October, 1895, and the average of six months for 1895:—

Year.	Av. % Fat in the Milk.	Flavor.	Closeness.	Even Color.	Texture.	Finish.	Total Scoring.
1894.	3.94	Possible Score. 1505	Possible Score. 860	Possible Score. 645	Possible Score. 860	Possible Score. 430	Possible Score. 4300
43 experiments.	3.37	Points Scored. 1455.5	Points Scored. 785.5	Points Scored. 606.5	Points Scored. 766.5	Points Scored. 430	Points Scored. 3896
1895: average six months.	3.90	Possible Score. 1505	Possible Score. 860	Possible Score. 645	Possible Score. 860	Possible Score. 430	Possible Score. 4300
72 experiments.	3.17	Points Scored. 2147.5	Points Scored. 1440	Points Scored. 1080	Points Scored. 1410	Points Scored. 720	Points Scored. 7200
1895: average six months.	3.90	Possible Score. 1505	Possible Score. 860	Possible Score. 645	Possible Score. 860	Possible Score. 430	Possible Score. 4300
72 experiments.	3.17	Points Scored. 2147.5	Points Scored. 1440	Points Scored. 1080	Points Scored. 1410	Points Scored. 720	Points Scored. 7200

Taking the total scoring of the cheese made in 1894, from milk averaging 3.94 per cent. of fat, we find that it has scored 3,896 points out of a possible 4,300. The cheese made from milk averaging 3.37 per cent. of fat, scored 3,896 points out of a possible 4,300—a difference of 43½ points in favor of the cheese made from what we may call average milk, as compared with fairly rich milk—practically four per cent. of fat.

In October, 1895, out of a possible 1,300, the score of cheese made from 3.90 per cent. milk was 1,174. The cheese made from 3.37 per cent. milk scored 1,167.5, out of 1,300—a difference of 6½ points in favor of the richer milk cheese. [Had the October cheese been richer, they would have scored higher.

The scoring was made on some of the cheese the latter part of the month, before they were a month old.]

The total score of 72 cheese, made from milk averaging 3.98 per cent. of fat, for six months of 1895, was 6,415 out of a possible 7,200. The cheese made from 3.17 per cent. milk scored 6,390½ points out of a possible 7,200—a difference of 15½ points in favor of the richer milk cheese. Your readers may draw their own conclusions. H. H. DEAN.

Why the Cream Will Not Churn.

SIR,—As I have received a number of letters from different parts of the country, asking for information how to churn cream, that many are finding so difficult to churn in fall and winter, I thought it would not be out of place to give your readers the benefit of my experience, and offer some suggestions that would benefit those who will follow the suggestions given. I have churned cream in all conditions and degrees of ripeness; and have never had any difficulty when the temperature was right. Some of the causes why cream won't churn are as follows:—

1st. Ninety-five times out of 100 the temperature is too low. There is no temperature that will suit all kinds of cream, neither will all kinds of cream churn at the same temperature.

In a dozen different dairies, as many different temperatures may be required to churn the cream of each dairy in 30 to 45 minutes when all other conditions are the same. We were compelled to churn at 47° to 50° in the early part of last summer to get a good, firm body in our butter. But at the same time churning was done in many good dairies at 62° to 66°, giving equally as good butter, and with as good texture as ours. These are extreme temperatures for the season, as the usual churning temperature is about 58° in the summer months. I might say the only reason we have for our cream churning at such low temperature is that we had a good number of cows added to the herd in the spring, their cream being much easier to churn than any we have ever churned before. Our churning temperature is about 60° at time of writing, while some are forced to churn at 68° to 70°; so that no one temperature would suit all kinds of cream.

Our rule and guide to find the proper churning temperature is to note the time taken to churn. If it takes over 45 minutes, we churn at a higher temperature; and if less than 30 minutes, we churn at a lower temperature.

2nd. Churning in a cold room delays the butter. The churn should be warmed to overcome the low temperature of the room. The temperature of the room should be as warm as the cream.

3rd. Filling a churn half full and over is a very bad practice, as the cream swells while churning, leaving no room for concussion. Take a portion of the cream from the churn when trouble like this is met.

4th. The per cent. of butter-fat or skim milk in the cream affects the time required to churn. Cream containing 25 to 30 per cent. butter-fat will churn at a low temperature, but cream containing only 10 to 12 per cent. can hardly be churned at as low a temperature. There is no difficulty in churning cream containing 17 to 30 per cent. butter-fat or cream that will yield a pound of butter from less than 4½ pounds, if the temperature is right.

5th. The breed of cows will effect the time in churning, but the proper temperature will overcome the difficulty. Cream from Jersey and Guernsey cows is generally more difficult to churn than from some of the other breeds.

6th. The length of time cows are milking has very much to do with the trouble in some dairies. The churning should be done at higher temperature where the churn is filled one-third full and run at 70 to 80 revolutions per minute. The room as warm as the cream, the cream containing no less than 16 per cent. butter-fat, and can't be churned at any temperature, then the cause can be traced to some one or more cows in the herd that have been milking a very long time. The cream from the suspected cows should be used for some other purpose or churned by itself until the cows causing the trouble are found out.

There is no such thing as a witch in the churn, but a good cause can be found for all the troubles met with in so many dairies.

7th. Sometimes the butter comes in small granules, but will not gather. This is caused by too large a percentage of skim milk in the cream and churning at too low a temperature, or adding a quantity of very cold water too soon after the butter breaks. With a churning like this, it would be better to draw off about half of the buttermilk through a fine milk-strainer to catch what butter may come out. Return this butter to the churn and continue churning until the butter is gathered. The temperature of the water added to the cream should not be less than 5° colder than the cream, except in very warm weather.

Adding hot water to cream when churning is the worst of all practices, as the color and body of the butter is destroyed. This is the chief cause of the white, soft, spongy butter so common on all our markets.

How to have trouble.—1st. Run the dairy without a thermometer. 2nd. Have two or three times as much skim milk in the cream as there should be. 3rd. Churn without considering temperature. 4th. Fill a cold churn half full and over. 5th. Pour in an abundance of cold water at first appearance of butter; then the patience of any good man or woman will be sorely tried to get the butter.

How to avoid trouble.—1st. Skim the milk carefully, having as little skim milk in the cream as possible. 2nd. Make intelligent use of a thermometer in tempering the cream for ripening and churning. 3rd. See that the cream is at the proper temperature before pouring into the churn. 4th. Fill the churn only one-third full. 5th. Speed the revolving or barrel churns 70 to 80 revolutions per minute. 6th. When the butter is about half gathered, add 10 to 25 per cent. of water about 5° colder than the cream, but at a lower temperature in hot weather, or when the butter is coming too fast; then continue the churning until the granules are as large as wheat.

If these directions are carefully followed and butter can't be got, raise the temperature; if the temperature won't do it, then search for that cow mentioned above.

T. C. ROGERS.
Dairy School, Ontario Agricultural College.

A Dairy School for Western Ontario.

The new dairy school at Strathroy, Ont., especially designed to serve the needs of the western part of the Province, will be opened for students on Wednesday, Jan. 22nd. We visited the institution a few days ago, finding a much more extensive building in some respects than we anticipated would be required. Exclusive of engine, boiler and weigh rooms, the dimensions are fifty feet six inches by sixty-five feet; main walls, thirty-six feet high; ceilings, thirteen feet below and twelve feet in second story; slate roof. Not including heating, plumbing, general furnishings and apparatus, the building cost \$7,500, so that the total will probably amount to \$12,000 or \$13,000, as it is being fitted up in most approved style for the purpose intended—barring a few slips in construction, which probably arose chiefly from the Public Works Department being hurried in the matter and not submitting all the details to Dr. Mills, President of the O. A. C., who is the Director, and Mr. F. J. Sleightholm, the Superintendent. For instance, no practical dairyman would have designed so needlessly laborious an arrangement for taking in milk for the butter-making department as we noticed. The milk separating and buttermaking operations are all to go on in the same room—a plan which many advanced dairy experts now regard as not the best, as the latter should be done in a lower temperature than the separating-room requires. Mr. Sleightholm intimates that this may be altered another season by a partition. The milk testing, cheese and butter making and storing rooms are downstairs; the offices, lecture, reading and waiting-rooms, lavatories, etc., above. In the cheese room there are two 1,000-lb. vats, and in the buttermaking department, a 1,500-lb. per hour Standard Russian, a No. 1 Alfa De Laval, and two Alexandra Separators (hand and power), also power and hand churns, deep and shallow setting appliances, and all other necessary modern dairy apparatus. The building is heated with steam, abundantly supplied with water, and splendidly lighted. Arrangements are being made for a supply from farmers in the vicinity, of from 3,000 to 3,500 lbs. of milk per day, to be paid for at 21 cents per pound butter-fat. From the butter department skim milk will be returned to the patrons, 80 lbs. for every 100 lbs. whole milk, and in the cheese department an allowance of 15 cents per 100 lbs. will be made in place of the skim milk.

It is a school of short courses, particularly for young men and women, the sons and daughters of farmers who can not take the time for so full a course as at the Guelph Dairy School in connection with the O. A. C. The courses will begin on the following dates:—January 22nd, February 5th, February 19th, March 4th, March 18th. A course will embrace practical instruction for two weeks in either buttermaking, milk-testing and the running of cream separators, or cheesemaking and milk-testing. In addition to the practical work, lectures will be given on the following subjects: "Business Management," "The Composition of Milk," "The Care of Milk for Home and Factory Use," "The Separation of Cream from Milk," "Milk Testing," "Buttermaking," "The Principles of Cheesemaking," "Practical Cheesemaking," "Creamery and Cheese Factory Machinery," "Care of Boiler and Engine," "Feeding and Management of Dairy Cows," etc. Having taken one course, a student may repeat it or take the other course, and may remain at the school for two weeks or as much longer as he wishes. Admission is practically free, only a \$1 registration fee being required. Board and lodgings can be obtained very reasonably in the town.

As stated, Dr. Mills, of Guelph, is General Director, and Mr. Sleightholm, Resident Superintendent. The latter is a B. S. A. of '91, O. A. C., and for two years has been in charge of the Travelling Dairy, in which capacity, and as assistant buttermaker at the Guelph Dairy School, he rendered excellent service. Full of energy, enthusiasm, and practical knowledge, he should give a good account of himself as head of the Strathroy school. For a year and a-half or more past, we might mention he has been a valued contributor to the FARMER'S ADVOCATE, under the initials "F. J. S." The buttermaker will be Mr. H. Smith, who headed the Guelph Dairy School list in his term, and last year very successfully conducted a creamery and milk-separating station in Quebec. His assistant is Mr. J. E. Crealy, B. S. A., also an O. A. C. graduate who has made a decided success in private dairying near Strathroy. The Cheesemaking Instructor appointed is Mr. Wm. Waddell, who took first-class

honors in the cheese department of the Guelph Dairy School for 1895, and stood high in the class for all departments. During the season of 1895 he made cheese in the Huttonsville factory, Peel Co., and is without doubt a first-class man.

With so splendidly equipped and well-manned a school at their very doors, the people of Western Ontario cannot complain of lack of the means to secure practical instruction in the art of making good butter and cheese, which the Provincial authorities have thus placed at their disposal. The expenditure therefor has been large, and though, unfortunately, too little time has been allowed prior to the inauguration this season, we trust it will be taken full advantage of, so that the results will be commensurate with the outlay.

Ontario is now surely well-equipped with dairy schools, having one in the East, another in the West, besides the main institution for that industry in connection with Agricultural College at Guelph.

GARDEN AND ORCHARD.

Construction of Berry Crates.

BY ELLIS F. AUGUSTINE, LAMBTON CO.

The small fruit grower should now see that everything is put in readiness for the busy season when it arrives; and a sufficient number of crates for shipping should be constructed in this season. There are many stormy days when such work can be done to advantage, which, if neglected, will cause much loss and worry during the rush attendant upon the ripening of the fruit. A larger number of crates is required than one would suppose, as very often empties are not returned until a week or ten days after shipment. I shall give the dimensions of the ones we use, which our commission men assured us last season were the most convenient for handling, and carried the fruit with the least damage of any they received. The inside dimensions are: Twenty-one inches long, 16 inches wide, and 11 inches deep. They are made of well-seasoned basswood, dressed on both sides, which is fully equal to pine and much cheaper. The lids and ends are three-quarter inch thick, while the sides and bottoms are made of half-inch slats. There is an opening cut in each end-piece one inch wide by four and one-half inches long, which serves for handles. There are four slats two inches wide on each side, and the two outside bottom ones are of the same width, while the two center ones are three and one-half inches wide. A strip one by one-half inch is nailed up each corner and across the bottom at each end. A like strip is also nailed across the lid, one and one-half inches from each end. In this way the bottom strips set outside of those on the lids when the crates are tiered up, which prevents their shifting. A strip of sheet-iron is nailed around each bottom corner, making the crates very strong, which they have need to be, as the empties are subjected to pretty rough usage in the hands of the railway employees. These crates hold three tiers of boxes, with twelve in each tier. The second and third tiers rest upon slatted frames, which are made of four lengthwise pieces, one by one-half inch in size, and eight cross-pieces one by one-eighth inch. Half-inch strips are also nailed crosswise of under side of lids, which rest upon the edges of upper tier of boxes, keeping them in place so well that the crates can be set in almost any position without damaging the contents.

These crates are very light, only weighing fifteen pounds, and with reasonable care in handling will last for many years. The open spaces in sides and bottoms permit the air to circulate freely through them, which keeps the fruit cool and fresh.

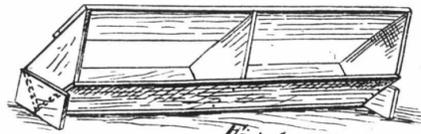
The selling price of these crates is 75 cents each; but we made some last spring which cost us less than \$25 per one hundred, not counting our own work. The lumber was taken to our nearest sash and door factory, where it was dressed and cut up all ready for nailing together, so that about ten crates can be put together each day. We paint them a light blue color, with white up corner strips, which shows the berries off to good advantage, and this helps greatly towards selling them, for in an overstocked market it is only such fruit as is choice and put up in the most attractive manner that will bring paying prices.

Protection of Young Trees.

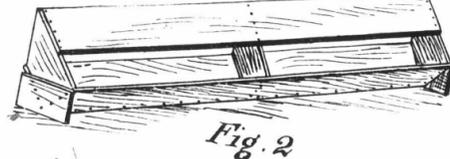
When one has gone to the trouble and expense of setting out fruit trees, the precaution necessary to keep mice and rabbits from gnawing the bark should not be neglected. Most frequently the trouble with mice arises in orchards that have been allowed to grow up with grass and weeds, especially about the trunks of the trees. Such conditions are favorable to nesting of the vermin. While it is now too late to cultivate, the trouble may be largely avoided by removing grass and other vegetable matter by a sickle or sharp hoe. It is also a good practice after snowstorms to go out and tramp the snow firmly about the trunks to hinder burrowing. When rabbits are plentiful, as they are rapidly becoming in some sections, it may be necessary to protect the trees with closely woven wire screen, cut into strips from eighteen to twenty-four inches wide. These may be tacked on to the trunk or laced up with wire. Old stovepipe lengths are frequently used for this purpose, by splitting them down and placing them around the same as is recommended for the screen wire. By giving immediate attention to this matter, much damage to young fruit trees may be avoided.

THE HELPING HAND.

A Handy Portable Hog Trough.

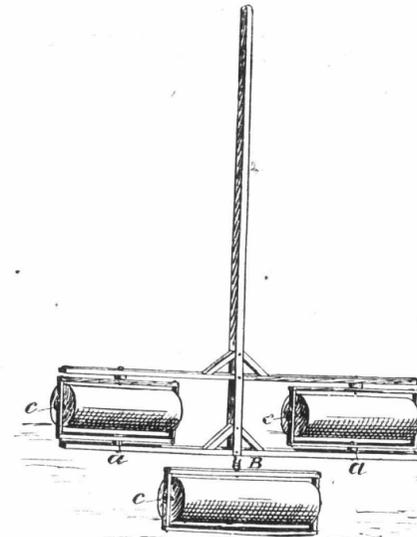


J. H. WOOLEY, Norfolk Co., Ont.:—"Take two planks, one twelve inches and the other ten, nail the narrow one firmly to the other in the shape of a V, leaving one side of the trough four inches wider than the other. This can only be done by nailing the narrow one to the wide one, and not vice versa. Then take for the ends, and for the center—if you are making a very long one—plank



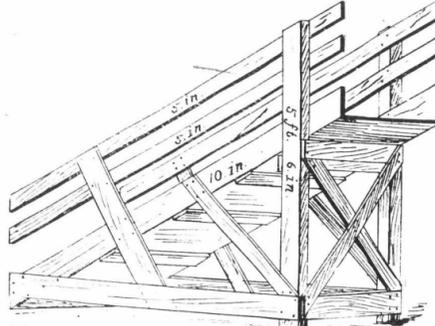
eight inches wide, and cut in shape of end-piece shown in engraving. Set them in the trough and nail. Then take a board a foot wide or so, and nail it to the three, leaving a space of four or five inches between the lower edge of board and the trough. This space is to pour in swill, etc. Advantages.—1. Cheapness. 2. Hogs can drink from one side of trough only, and not bother the feeder. 3. Can be moved anywhere. 4. Easy on pigs' snouts and sole leather. Figs. 1 and 2 show both sides of trough." (Our artist has shown the front side of the trough to be the higher, while it should have been shown the lower.)

Land Roller.



ALBERT NORTON, Carleton Co.:—"The sketch herewith shows a land roller. The rollers are 3½ feet long, and the hind roller laps three inches on each of the others. The frame is made of 2½ x 3 inch scantling—oak or ash. 'A' shows the bolt and washer between the two frames, so as to let roller frame play easy between the outside scantling. 'B' shows hook and ring for drawing the hind roller. 'C' shows half boxes bolted to end of frame, for pin in end of roller."

Pig and Sheep Loader.



W. C. HUFF, Prince Edward County:—"It is very simple in construction and an indispensable convenience. I loaded seven pigs in three minutes, and without it would probably have taken an hour, besides heavy lifting. Any person can make one in a very short time, with a hammer and saw. There are plenty of pieces around that can be utilized. The dimensions are: Walk, seven feet long, two feet eight inches wide at bottom, and two feet at top; by ripping a slanting strip off each outside board, will make the walk nearer the width of a crate.

Nail on eleven s... For wro... length, p... cool slo... use. Th... each out... four scar... not han... off trou... thirty-se... on front... example... good loa... missed.

There... duck fan... best adap... and Ayl... given to... no varie... ordinary... market... half the... ens. Ma... without... take—the... with a s... enable th... England... quantiti... in the vil... ville rais... hundred... ally in... markets... and are... in the sea... and later... weight... pounds;... tion bir... pair; bu... for stock... the drake... being sim... The P... and large... breeding... neighbor... The Pek... legs bei... and when... to avoid... the feath... size of th... with a ye... large, cre... feathers... The R... Mallard... immense... ferred to... their hab... market... beautiful... in color... The M... admirers... about fou... and stron... be taken... laying se... under he... if possible... (almost... cover ten... days for... break th... hatching... getting c... skin may... wack, in... warm wa... in the sh... the hen... give the... very litt... will padd... as a thre... be taken... they hav... stroke... morning... and will... Give the... and keep... weeks... of soft f... excellent... ing-tin w... drinking... trough... market... they con... cannot th... it is inter... should be... season fo... prices... specimen

Nail on four battens, and on opposite side nail eleven strips to keep the animals from slipping. For wrought-nails, take some cut nails the desired length, place in the stove, allow to become red, cool slowly and oil them, then they are ready for use. The next to do is nail a ten-inch board on each outside of walk; for uprights take two two-by-four scantling, five feet six inches long; if they are not handy use a plank. I took one side of a cast-off trough and ripped it. Fasten the uprights thirty-seven inches from the bottom with a strip on front and one on other side a little lower. See example for rest. Brace well and you will have a good loader. The time and material will never be missed. Try it and be convinced.

POULTRY.

Duck Culture.

BY M. MAW, WINNIPEG.

There are a great many useful varieties of the duck family, but the best known and probably best adapted for general use are the Pekin, Rouen, and Aylesbury. Very little attention has been given to duck raising in this country, yet there is no variety of poultry that succeeds so well in ordinary surroundings, commanding the highest market price, and reaching maturity in less than half the time required by turkeys, geese or chickens. Many people think that ducks cannot be kept without a river or pond to swim in; this is a mistake—they grow quicker and are quite as healthy with a small quantity of water in a deep pan to enable them to clean their bills and nostrils. In England, the Aylesbury ducks are grown in large quantities, and fetch very high prices. Cottagers in the villages of Aston, Clinton and Weston Turville raise thousands on small lots, and over one hundred thousand dollars in cash is realized annually in return for ducks shipped to the London markets. Aylesbury ducks are very quick growers, and are often marketed at six weeks old, and early in the season fetch as high as five dollars a couple, and later realizing about two dollars. The average weight of a year-old Aylesbury duck is about six pounds; the drake about seven pounds. Exhibition birds have been shown at twenty pounds the pair; but when so large and fat they are useless for stock purposes. They are pure white in color; the drake, with the exception of a curl in his tail, being similar to the duck.

The Pekin is the universal favorite in the States, and large duck farms, with one to two thousands breeding ducks, are successfully carried on in the neighborhood of New York and other large cities. The Pekin has a peculiar shape and carriage; the legs being far back make it walk upright; and when frightened, it has often great difficulty to avoid falling. It has a very large frame, and the feathers being loose give it the appearance in size of the ordinary goose. In color they are white with a yellow tinge. They are very good layers of large, creamy-white eggs; easy to raise, and the feathers are equal to the best geese feathers.

The Rouen ducks are very similar to the Wild Mallard in markings and color. They grow to an immense size, and, for general use, are often preferred to any other breed. They are very quiet in their habit and seem to be always fat and ready for market. During the summer the drake loses his beautiful plumage and appears similar to the duck in color.

The Muscovy and Cayuga ducks also find many admirers, and are very hardy. The best mating is about four ducks to one drake to insure fertile eggs and strong, healthy progeny, and great care should be taken not to overfeed stock ducks before the laying season commences. Most ducks are hatched under hens; and in making the nests it is advisable, if possible, to set them on the ground in a large (almost flat), roomy nest—an ordinary hen will cover ten duck eggs. The usual time is twenty-eight days for incubation, and the young ducks will often break through the shell 24 to 36 hours before hatching. If left alone it will generally succeed in getting out all right; but if disturbed, the inner skin may dry and adhere to the down on the duck's back, in which case it is advisable to dip the egg in warm water, allowing the water to enter the hole in the shell, drain it out and replace the eggs under the hen. It is best to set several hens at once and give the whole flock to one hen. They require very little heat, and when three or four days old will paddle their own canoe, and act as independent as a three-months-old chicken. Care should always be taken to protect them from the midday sun; they have very thin skulls, and are liable to sun-stroke. If you allow them to drink in the early morning before feeding them they are often giddy, and will sometimes spin around and fall over dead. Give them good, dry, warm quarters to sleep in, and keep them out of the water for several weeks. In feeding, you can give them any variety of soft feed; boiled potatoes mixed with meal is excellent. Sharp grit in the bottom of their drinking-tin will be freely used, and always place the drinking-tin a long distance from the feeding-trough. It is best to kill those intended for early market at about eight weeks old, after that age they commence to get their second feathers and cannot then be marketed till 12 or 13 weeks old. If it is intended to raise ducks for the market, care should be taken to get them ready during the close season for game, and they will fetch much higher prices. Always save the earliest hatched and best specimens for stock purposes.

Ontario Poultry Show and Convention.

The 22nd annual show of the Ontario Poultry Association was held in Port Hope from January 6th to 10th, inclusive. There was a good attendance of noted breeders and exhibitors. The entire number of entries was 1,261—being 100 less than last year. This should not be considered as an indication of any falling away of the interest hitherto shown in the poultry industry, for the lack in numbers was universally considered to be more than made up for in the increased excellence of the birds shown.

The Bantam and pigeon department was well represented, and the entire exhibit of pet stock fully up-to-date. Particularly noticeable was a beautiful pair of Golden pheasants, also some Silver pheasants. The turkey, duck and geese exhibit contained some magnificent specimens of Bronze and other varieties of turkeys. A pair of beautiful Pekin ducks attracted the admiration of every one. The drake weighed 10½ pounds, and was said to have obtained first premium at the World's Fair. Other varieties of ducks and geese were well represented by some of the largest and finest specimens ever exhibited in Ontario. There were not many entries in dressed poultry and eggs. What were shown were fairly good, except dressed ducks, which were small and not well fattened. This exhibit should be larger than it is.

The various breeds of fancy and utility fowls were all well represented. It would take too much space to give even a short sketch of the best birds of each variety, and it needed only a glance at the score cards to convince one of the excellence of almost every specimen. It was hard to see where improvement was possible where so many birds scored from 90 to 96.

Some very fine specimens of Plymouth Rocks, both Barred and White, were shown. White and Silver Laced Wyandottes, Dorkings, and Houdans—all standard table fowls—were well represented. Leghorns, White and Brown, were a large exhibit, and some good birds were shown. One especially beautiful white pullet scored 96. Other breeds, such as Cochins, Brahmans, Langshans, and Javas, also the different varieties of Games, deservedly won high approbation, and we noticed many specimens of fine Minorcas and Black Spanish. Many other varieties were represented and were no doubt worthy of commendation; but the above mentioned classes deserve and should receive a greater share of attention from the practical poultry raiser. Many good birds were offered for sale at very low prices, and are within the reach of every farmer. It seems a pity that farmers and others keeping mongrel flocks of hens should not take advantage of such an opportunity to purchase pure-bred male birds to improve their stock. The fancy fowl, while filling a place of its own, should never be allowed to usurp the attention of the great majority of breeders, for after all is said, the hen that lays the greatest number of eggs and produces the plumpest and choicest broiler or roaster at the least cost to her owner, is the most profitable to the poultryman or farmer.

The Annual Meeting of members was held on the afternoon and evening of January 9th. The President, Mr. H. C. White, of Port Hope, in his opening address, characterized the entire show as being eminently successful. He especially congratulated the Association upon the utility and beauty of the new iron coops. He did not think, and felt sure all the members would agree with him, that the Government could have done a better thing for the poultry industry than they did when they gave the grant for the coops. He suggested that a permanent resting-place be secured for the storage of the coops after each annual show. The directors shall, in future, be composed of one member from each of the thirteen electoral divisions into which the Government has divided Ontario for that purpose, and the annual show must be held at least forty miles from preceding one. A committee was appointed to nominate directors, and upon their retirement for that purpose.

Short addresses were given by Mr. McCormick and Mr. A. G. Gilbert (Poultry Department, Ottawa). Mr. McCormick thought that more should be done to interest farmers in the poultry business. He favored the utility fowl, and suggested that the prizes for dressed poultry be enlarged. Mr. Gilbert suggested that three sets of prizes be given to farmers—a separate set of three for farmers' dressed poultry, eggs and cross-bred fowl; a sum of money for this purpose to be distributed among large local shows and awarded to farmers' exhibits. He spoke at considerable length upon the demand there is for fresh eggs of good flavor, at superior prices, and laid especial emphasis upon the quality and superior flavor of unfertilized eggs during hot weather. Males should not be allowed among the hens, except during the breeding season.

Routine business followed for some time, and the question regarding a suitable place of storage for the new coops developed into a lively discussion as to loaning them to local shows. Cobourg Association had applied for them and was refused, and the local show men thought that it was unjust that the money of the farmers and the people of the country at large be given to the Ontario Association alone. Their opponents maintained that the coops were the sole property of the Ontario Association, and should be used for their exclusive benefit. Many thought that the poultry industry could not be better fostered than by loaning the coops to local shows that were willing to pay cost of trans-

portation, and replace any damage. The discussion lasted the whole afternoon, and all the papers and addresses on practical work were crowded out. It was finally closed by a motion to adjourn, which brought out an indignant protest from those who had prepared the papers and essays.

At the evening meeting, Mr. A. G. Gilbert gave the only practical address on poultry. The farmers came to poultry shows with skeptical ideas of Government delegates. They thought the delegates wanted them to kill off all their hens and invest in thoroughbred stock. This was not the case. They could buy a pure-bred male bird every year or two, and thus improve the fowls they had. A good hen would be worth \$1 per year above all expenses. If each farmer kept 50 hens and made a profit of \$50, what a large sum would be gained by the people of Canada! Eggs are now worth forty-five cents per dozen in Ottawa and Montreal, and throughout the summer a price very much in advance of that paid by general buyers could be obtained for good fresh eggs. Very many of the eggs placed by farmers on the markets were spoiled by being half hatched. By careful, scientific feeding poultry-keeping may be made a success, and by placing upon the market good, well-flavored eggs and well-fattened and attractively-dressed fowls, large prices could be obtained the year around.

The following officers were elected: President, T. Goudy; Vice-Presidents, A. Bogue and H. White; Treasurer, G. G. McCormick; Secretary, T. A. Browne, London. Delegates to Industrial, J. Dilworth and T. Duff; to the Western Fair, G. McCormick and J. H. Saunders. Auditors—T. Donovan and T. E. Duff. Directors—D. Trew, W. Barber, J. Cole, S. Seguin, M. T. Burn, T. H. Scott, T. Rice, W. McNeill, E. Donnelly, W. J. Bell.

The next annual show will be held at Guelph, beginning on the second Monday in 1897.

Winter Eggs.

Lousy hens will not lay winter eggs, no matter how comfortable their house, or how nutritious and palatable their food. It is too bad to allow lice to eat up all the profit and a good deal of the capital. There are scores of flocks of hens in the country that are never examined for lice from one year to another. Their owners are losing an important revenue by such neglect. When hens are examined and lice discovered, they should be thoroughly dusted with insect powder. They should be given fresh dust baths, to which have been added a sprinkling of insect powder and sulphur, say a tablespoonful of each. Besides this specific treatment, the house should have a good cleaning. A thorough whitewashing, with a little crude carbolic acid added, is not a bad thing. There is nothing better for applying it than a spraying pump. Provide clean, fresh straw in the nests, and you will have overcome one of the greatest barriers of winter laying.

VETERINARY.

Ontario Veterinary Association.

This Association, which is composed of qualified veterinary surgeons practicing in Canada and the United States, held its annual meeting in the Veterinary College, Toronto, Canada, on December 21st.

Mr. G. L. Robson, V. S., the President, opened the meeting with an excellent address.

After the usual routine business, a discussion ensued relating to the Act recently passed by the Provincial Legislature respecting veterinary surgeons, and a fine having been imposed under that Act, upon a person for falsely claiming the title, which fine should have been paid over to the funds of this Association.

The following new members were duly elected:—W. J. Morgan, V. S.; F. G. Hutton, V. S., and J. Wagner, V. S.

Prof. Sisson, V. S., of the Ontario Veterinary College, read an excellent paper on "Undescended Testicle in the Horse." In the discussion that followed, Mr. Quinn, V. S., who has had much experience in the castration of Cryptorchides, warmly complimented Mr. Sisson on the excellence of his anatomical description of the condition existing. Mr. A. Crowforth, V. S., read a very interesting paper on "Toxines and Anti-Toxines in relation to the cause, cure, prevention, and diagnosis of disease."

The Secretary was instructed to get new copies of register printed, and to have incorporated in the pamphlet the Act respecting veterinary surgeons recently passed, for distribution to members of the Association.

The following are the officers for the ensuing year:—Prof. A. Smith, Honorary President; Mr. H. Hopkins, V. S., President; Major Lloyd, 1st Vice-President; Mr. S. Sisson, 2nd Vice-President; Mr. Sweetapple, V. S., Secretary; Mr. W. Cowan, V. S., Treasurer. Directors—Messrs. J. Wende, W. J. Wilson, W. J. Morgan, J. F. Quinn, W. Steele, W. Gibb, A. Crowforth, and W. Burns. Messrs. C. Elliott and J. D. O'Neil, Auditors.

Messrs. J. H. Wilson and J. D. O'Neil, delegates to the Western Fair Association.

Prof. A. Smith and Mr. H. Hopkins, delegates to the Industrial Exhibition Association, Toronto.

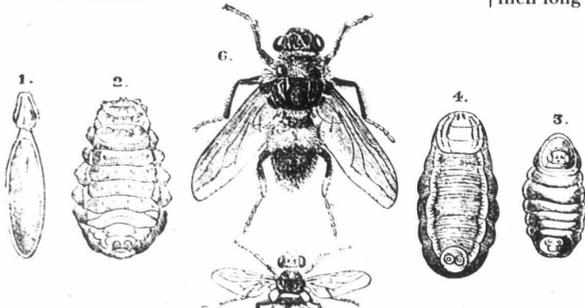
Mr. W. Cowan was nominated to represent the Association at the Central Farmers' Institute, but he explained that it would be better for the veterinary surgeons practicing in the various localities to be placed on the lecturing staff.

The Warble Fly.

BY S. G., MIDDLESEX CO.

"It seems a pity that the knowledge so easily obtained in this age of agricultural literature is not better applied and made of more practical use for everyday purposes. I wonder how many cattle owners, after having read the following, and, having studied the subject further, will make up their minds that no animal of theirs shall be a victim of that much to be dreaded insect, the Warble-fly. We have heard a great deal from various sources and have seen different accounts of this insect, and the collection of evidence derived from stock keepers, butchers, hide merchants and tanners, all vouch for the great loss and suffering caused by the horrible maggot of the Warble-fly. The sufferings caused to the unfortunate animal infested with Warble-maggots leads to one form of loss. It begins with the terror of the beast when it gallops madly about in vain efforts to escape from the flies seeking to deposit eggs upon or in their hides. A fat beast having to run, perhaps, ten miles a day in the heat, may lose \$1 worth of beef in a week from this cause. This, however, is as nothing in comparison with the fate of an animal when it has a number of great grubs feeding upon its back and loins under its skin, each keeping up a festering wound. There may be, and I myself have seen when there have been from six, ten or twenty, or sometimes even a hundred, or two, three or four hundred of them strong maggots growing up to an inch in length and feeding in the sores. As the suffering grows so does the loss, and the farmers of to-day have little they can afford to unheedingly lose. One has no idea of the loss in damage to hides (which have greatly increased in value of late), but even this is as "cents" to "dollars" in comparison to the loss on the animals and the drain on their system, and the damage done to carcass when the maggots have produced what is known as "jelly" or "licked" beef. The loss in milk among dairy cows infested with Warbles is probably nearly or quite as great as the loss in meat among fat beasts, head for head. On this point, Professor Riley, late Entomologist to the American Department of Agriculture, gives it as the opinion of Mr. T. D. Curtis, that the loss in the quantity and quality of milk from the annoyance to cows of flies, and later on by the grubs, may be put at ten per cent for shrinkage, and the same for deterioration in quality. There have even been known cases of cattle being killed by blood-poisoning caused by the Warbles. In one case, a two-year-old heifer which died of mortification was found to have over 400 Warble-bots in her skin; and even this extreme degree of infestation must have been surpassed in the case of the yearling from which a piece of hide 24 in. by 14 in. was taken and photographed, for in this small patch 402 Warble holes were counted. With respect to the injury done to the meat by inflammation set up by Warbles, resulting in what is called "licked beef," the loss to butchers is shown to be enormous; of course they do not bear the whole of it, as they take jolly good care to allow freely for expected damages when they purchase a warbled beast. They are not only a cause of loss, but of much pain to the poor beast, that might be avoided. While the animals are suffering physical pain, the owners themselves are suffering in pocket, and more than they imagine; the loss results from the lowering of the condition of the cattle, and the dairy-farmer loses in the milk. It is an impossible thing for the general health of the cattle to be so good when suffering the pain caused by the Warbles."

The above letter from our Middlesex correspondent may appear to some readers as over alarming and overdrawn, but an entomological authority of no less standing than Miss Eleanor A. Ormerod, the late Consulting Entomologist to the Royal Agricultural Society of England, has prepared a series of leaflets dealing with this troublesome insect, the Warble-fly (*Hypoderma Bovis*), from which the following information and accompanying cuts are taken.



1, egg; 2, maggot; 3 and 4, chrysalis case; 5 and 6, fly; 3 and 5, natural size; the other figures are all magnified.

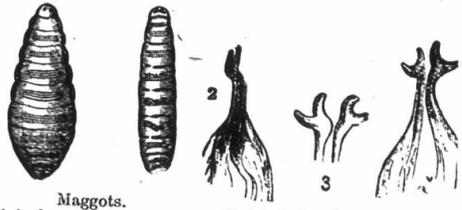
The Ox Warble-fly, or Bot-fly, is a two-winged fly, upwards of half-an-inch in length, so banded and marked with differently-colored hair as to be not unlike a humblebee. The face is yellowish; the body between the wings yellowish before and black behind; and the abdomen whitish at the base, black in the middle, and orange at the tip. The head is large; the wings brown; and the legs black or pitchy, with lighter feet.

The female is furnished with a long egg-laying tube; but whether she inserts her eggs into the hide or lays them on it has not been made out with certainty.

Egg-laying takes place during the summer; it may begin in the month of May, but the time varies with the weather, and with the cattle being on low land or hill pastures, and other circumstances. The egg is oval, and white, with a small brownish lump at one end.

When full-grown, the Warble-maggot is the shape figured above.

The mischief may first be found on the flesh side of the hide early in the winter. Specimens received on November 13th, showed the first appearance as small swellings, bluish in color, as if half a large shot was under the skin, and much inflamed round. The maggots were very minute and blood-color, and lying free (not in a cell) with a fine channel down through the hide to where they lay.



Maggots. Club-shaped. Worm-like. Mouth-forks of young maggot, much magnified.

The open Warble was first found towards the end of January, and by the end of February open Warbles were noticeable in many places, and the maggot was now white (not being feeding in bloody matter), worm-like, and with strong mouth-forks; in its next stage it was club-shaped, and had a power of inflating itself by drawing in fluid until it was almost as hard and transparent as ice, and lying small end uppermost, thus kept pressing the opening through the hide larger. In its next stage it gained its well-known shape, with thicker and more prickly skin, the Warble cell at the same time gaining its membranous coating.

The maggot can move up and down, but commonly has its brownish-tipped tail at the opening, and it draws in air through breathing-pores in these brown-black tips or spiracles. The mouth-end is down below, feeding in the ulcerated matter caused by irritation from perpetual suction of the mouth-parts. The maggot cannot protect itself from the effect of applications, therefore anything put on the opening where the breathing-tips show will choke the breathing-apparatus, or run down into the hole and poison the maggot. The earlier this is done in the season the better it will be for the animal, and the less difficulty there will be in the Warble-holes healing.

Whilst the maggots are in the Warbles, though a skin-like membrane forms round the surface of the perforations, they cannot heal up because the maggot lies within; and when the Warble-grub has fallen out, though the hole contracts, the surfaces, being already covered with a film of tissue, are slow to unite; and, as may be seen in the warbled hides, union is often prevented by this skin-like film shelling off, and lying with dried matter in the perforation. On the under side of the hide, though the surface may not be broken, yet the subcutaneous tissues are often left as a mere film of no strength which injures the surface of the leather.

When the maggot is full-grown it is about an inch long and dark gray; it presses itself out of the opening, tail foremost, and falls to the ground, where it finds some shelter, either in the ground or under a stone or clod, where it changes to a chrysalis. The chrysalis is dark brown or black, much like the maggot in shape, only flatter on one side; and from this brown husk the Warble-fly comes out in three or four weeks, but this length of time is increased by cold weather.

With regard to methods of remedy, there does not appear to be any difficulty in getting rid of the Warble-maggot easily and cheaply, when the Warble has "ripened" that is, opened so far that the black end of the tail is visible. Then it may be destroyed cheaply and quickly. From special observations taken during the last three years it has been found that where the Warble-maggots have been destroyed before they drop from

the cattle, there is little if any summer attack of Warble-flies. Consequently the cattle can rest in peace, and, as there is very little egg-laying on them, there are scarcely any Warbles in the following spring.

Squeezing out the maggots is a sure method of getting rid of them, but they may be destroyed easily and without risk by dressing the Warble with a little of one of the various effective louse and tick dips, or any grease or mixture thick and tenacious enough for a little "dab" of it, when placed on the opening of the Warble, to adhere firmly, and thus choke the maggot by preventing it drawing in air through the breathing-openings at the end of the tail, will answer well.

To prevent fly-attack in summer, train-oil rubbed along the spine, and a little on the loins and ribs, has been found useful; so has the following mixture: Four ounces flowers of sulphur, one gill spirits of tar, one quart train-oil; to be mixed well together, and applied once a week along each side of the spine of the animal. With both the above applications it has been observed that the cattle so dressed were allowed to graze in peace, without being started off at the tearing gallop so ruinous to flesh, milk, and, in the case of cows in calf, to produce.

A mixture of tar, linseed oil, sulphur, and carbolic acid, has also been found useful; and anything of a tarry nature is useful, as sheep-salve (bad butter and tar mixed with sulphur), rubbed on the top of the cows' backs between the top of the shoulder-blade and loins. Washes of a strong pickling brine, applied two or three times during the season, are very useful.

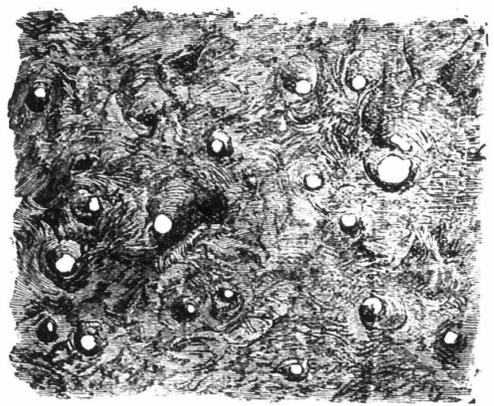
[NOTE.—It may be mentioned just here that Warble-fly and hornfly remedies have much in common, both in ingredients and time of application, which fact renders the prescribed treatment of especial value and effectiveness.—Ed.]

Where cattle are suffering badly from Warbles, so that the health is clearly affected, and the animal wasting, the use of the well-known old "black oils" has been found to do much good.

It is a matter of course that where the maggots have fallen from their backs, the flies will shortly appear to start new attacks. Warble-attack is one of the few in which each owner benefits surely by his own work.

The attack of Warbles is now grown to be one causing enormous annual national loss, estimated by practical men at sums from two million to seven million pounds sterling per annum, at the least. There is no sort of reason why we should suffer it to go on; and the reports sent in from cattle-owners in Great Britain and Ireland during the last ten years show the ease with which the attack may be checked, and the great consequent gain to the owners.

The accompanying figure shows the ruined state of a badly warbled hide, or of what often happens to the best portions of the best hides—a sheer waste of money, calculated by many thousands of pounds annually. From the cattle-owner's point of view, we have to consider the direct injury to health and



"Warbled" Hide.

fattening powers so quietly borne that its existence is often not recognized; and (even in cases where the attack is completed by death) it may happen that it is not until the riddled hide is lifted from the jellied back that the reason of the trouble is made known, which a quarter of an hour's care, and outlay of a few pence earlier in the year, would have quite prevented. Besides this is the well-known damage in dairy and other herds from loss of milk and harm to the cows, and loss of flesh to fattening beasts by tearing about "at as good a pace as can be got out of them."

A Productive Cow.

G. H. F., Saskatoon, N. W. T., writes us:—"In May, 1892, I bought a cow with calf at foot. In May, 1895—three years—I had from the above cow eight head—all heifers. I would like to hear from any reader of the ADVOCATE who can beat this."

A York County reader writes: "The FARMER'S ADVOCATE improves with every number, and is a paper that Canadians ought to be proud of. It is brimful of practical matter on agriculture."

QUI

In order parties encl mail, in case enquiries, w succeeding Engulfers n in full, thou

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QUESTIONS AND ANSWERS.

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

Veterinary.

J. C. D., Sault Ste Marie:—"Will you please answer through the veterinary column of the FARMER'S ADVOCATE the following questions: (1.) My cow, eight years and three months old, went dry immediately after calving. I gave her one pound of Epsom salts and one teaspoonful of ginger; she gained some in her milk, but does not give the flow she ought to. She does not appear to be sick; eats hearty, but still continues to be very thin and poor. (2.) I have also a cow four years old that does not eat her food as usual; she appears to groan as though it tires her to breathe. What is the matter, and what is the treatment for her?"

(1.) Very likely your cow was suffering from a slight attack of metritis or inflammation of the womb, and the medicine you administered gave some relief. Whenever milk secretion is suppressed and the flow stopped, it never regains its complete quantity. Give her some good tonic as follows: Epsom salts, 1 pound; sulphur, 1 pound; aniseed powder, 1 pound; ginger, 4 ounces; nux vomica, 2 ounces. Give a large tablespoonful in every feed. (2.) All the symptoms of acute inflammation of the lungs, and no doubt have received the attention that an acute case requires.

WM. MOLE, M. R. C. V. S., Toronto.]

ROUP.

W. S., Oxford Co., Ont.:—"My turkeys are swollen up under the eyes, and nostrils are filled up, causing difficulty in breathing. What is the trouble, and could you suggest a remedy?"

[The symptoms given, although few, indicate "roup." The leading features of this disease are high fever, with an offensive smelling discharge from the nostrils or eyes, or both, with the face considerably swollen. The remedy is to keep the sick turkeys in a dry, warm place, and give at first a teaspoonful of Epsom salts, washing the head and organs affected with a weak solution of chlorinated soda twice or three times a day all through the attack. The food should be slightly seasoned with cayenne. The turkeys should be given, after the salts have operated, a pill morning and evening, of the following ingredients:—Cayenne pepper, 20 grains; copper sulphate, 10 grains; copaiba, 1 fluid dram; to be made into twenty pills. Everything with which the turkeys have come in contact should be disinfected with dilute carbolic acid.]

Miscellaneous.

ROTTEN CARROTS.

B. C. D., Middlesex Co.:—"I have about 300 bushels of carrots. I opened pit yesterday, found them wet and some rotten. What can I do with them? I suppose they will all spoil. I have no roothouse for them. (1.) I have 30 head of cattle, are they good for them? (2.) Are they good for milk? (3.) How much to feed milk cows? (4.) Are they good for hogs and sheep? (5.) How best to feed them to cattle, when there is no machinery to cut or pulp them?"

[Carrots are good for all sorts of stock. We would advise feeding them out as rapidly as possible. Cows may safely receive three pecks each daily, from which the rotten portions have been removed. It would be safer, however, to split the large roots with a spade to prevent choking. Sheep may profitably be given a bushel for ten twice a day. Hogs, all they will eat, with a little grain; and horses a peck each per day, carefully fed at commencement. Dig into the pit at different spots, and remove the worst first. Do not feed when frozen.]

DAIRY SALT FOR B. C.

A Comox subscriber writes us:—"Would it be practical to ship your fine Ontario butter salt to this coast, as we seldom ever get a good butter salt here?"

[One firm wrote us that it was impossible, owing to excessive freight and English competition; Calgary being the furthest point they could touch. The Windsor Salt Works advise us that they are just completing arrangements for the sale of their salt in Vancouver, where they can ship a carload at 75 cents per one hundred, freight.]

RAISING WATER SUPPLY.

G. C. P., Spallumcheen, B. C.—"I am about to adopt a system of irrigation on my farm, and for that purpose am bringing water in a box flume 12 x 12 inches, which will be filled when the water is turned on. I will have to pump the water up 50 feet, where it will be most needed. What will be the best method of raising the water, having regard to efficiency, economy, and least waste of water? Any height or fall of water can be obtained."

[A hydraulic ram, such as referred to on page 10, Jan. 1st issue FARMER'S ADVOCATE, is an excellent machine for raising water by employing its own momentum acquired by a fall, a portion only of the water being raised in that way, however. We believe the head of water should be from four to six feet for raising water vertically thirty feet, though this probably varies with differently constructed

rams. If, as "G. C. P." states, any fall of water can be obtained (we presume by gravity), why not run it directly into the reservoir or tank from which the water is again to be distributed in irrigating? See article on "Hydraulic Rams," by John Taylor, Jr., in this issue. Gardeners and others use windmills in filling tanks for irrigation purposes.]

LIVE STOCK MARKETS.

Toronto Markets.

The demand for cattle on the opening market of the year was indifferent and prices were unchanged. Very few head were on sale, and were taken by butchers for local trade. Today (Jan. 10) trade opened briskly; prices firm and steady; buyers from Montreal being anxious to purchase on account of short supply. It is generally stated that there is a scarcity of prime cattle in the country at present.

Export.—A little more activity was shown among cattle buyers; one or two lots changed hands and were sent on to Montreal, at prices ranging from 2c. to 2½c. per lb., but no very marked improvement is to be expected for a week or two.

Butchers' Cattle.—A great improvement is noticed in the demand; 56 loads of cattle on offer, all cleared out by the close of the day. A load of young cattle averaging 1,010 lbs. each, sold for 3c. per lb., less odd change, and \$5 on the deal. Choice steers from 1,100 to 1,250 lbs. average, brought top price, 3½c. per lb. Some deals were made at 3½c. to 4c. per lb., 1,200 average, to \$10 on the deal. One steer shrunk in weight 100 lbs. in 48 hours, as the result of exposure. Seven cattle averaged \$19.50 each.

Bulls.—Very choice bulls sold up to \$3.30, one weighing 1,460 lbs., a little more. Mr. Crawford, M.P.P., purchased all on offer (about a load) for export, from 3c. to 3½c. per lb. Mr. Dames, of Brussels, had a bull seven years old, about 1,100 lb., broken of harness, and would drive by bridle reins. He said he could trot like a pony.

Sheep.—Good sheep were scarce and realized about 3c. per lb.; about 350 on the market; all sold.

Lambs.—Good lambs were in better demand than for some time, and were worth from about 3½c. per lb.; grain-fed lambs fetched top price, 4c. per lb.; everything on this market found a buyer.

Calves.—There were a few good calves on the market, which were sold at about \$5 each. Mr. Kinnear bought about 20 at prices ranging from \$4 to \$8 per head.

Milk Cows.—Offerings larger. Many remained unsold. It takes a good milking and fine-looking cow to go over \$30. There are more sold for from \$12 to \$15 than any other figure. Hogs.—Mr. Harris bought up all on offer, 1,100, at an advance on last week's quotation. It is only on this market that affairs are at all in a prosperous condition. The price shows an upward tendency, \$3.50 to \$3.70, best off cars. Light and thick fat, \$3.50. Sows, \$3. Mr. Matthews, from Peterborough, with packing-houses at Ottawa, was on the market, and reports prospects as good for the ensuing season, and he looked for a good advance in April or May.

Hides.—There is a better feeling in the market, and prices are firmer, owing, in a great measure, to the shipment of 7,000 hides to the United States. Local dealers are paying 5c. for green, and selling cured at 6c.

Deerskins.—Green, 8c. per lb.; dried, 2½c. per lb.

Sheepskins.—There is a fair demand, and the market is steady at 30c., but dealers say this is too much, as it does not leave any profit for the pullers.

Calfskins.—There is not much doing yet, nor likely to be for another month. No. 1 quoted at 6c. per lb.

Wheat.—Receipts of grain on the local market were slightly better this morning, on the improvement of the roads; 16 loads on offer. Two loads of white wheat on offer sold at 72c.

Barley.—Two hundred bushels sold at 44c. per bushel.

Oats.—Four hundred bushels sold at 28c. to 29c. asked for.

Hay.—Quality very poor; 12 loads on offer; one load prime quality, \$19; two loads, \$18.

Baled Hay.—Slow, \$14 to \$15 per ton.

Straw.—Six loads on offer, which sold at \$13 to \$14 per ton; loose straw and pea haulm, \$8 and \$6.

Wool Sales.—The concluding sales for the year, and the demand for all fine descriptions, have been the chief features. Fault and unclean parcels, on the other hand, have met an irregular market at a decline in value. The market is unchanged, and there is very little doing on the exchange. The last quotations published are:—Fleece co. biggs, 24c.; tub-washed fleeces 22c.; rejections, 17c. to 18c.; pulled supers, 21c. to 22c.; extras, 22c. to 23c.; combings, 22c. to 23c. The mills and dealers are busy taking stock; there is scarcely anything being done in the market.

Butter.—The market is healthy, and all first class grades are in active demand; receipts not large; prices steady all round. Dairy fresh, 21c. to 25c.

Eggs.—Strictly new laid eggs, 30c. to 35c. per dozen.

Montreal Markets.

Now that the holiday trade is over, the markets here have settled down to their ordinary groove, with prices for best cattle possibly a trifle better than was obtainable before Christmas beef came in. Much good is also expected from the incoming cold weather, as the very mild weather of the past few weeks has had a very depressing effect on all meat products, and the present cold weather has been anxiously looked for. Were it not for the fact that butchers had been pretty well caked out of stock, Monday's exceedingly severe weather would have prevented almost anything in the nature of a market being held; as it was, the numbers out were very few, but they were prompt buyers. The receipts of cattle were fairly light, and small stocks almost nil. A few of the best cattle offering made 3½c. per lb.; medium to good cattle, 2½c. to 3c.; inferior as low as 1½c. per lb.

Sheep and Lambs.—The offerings were very light and of rather medium quality; a few small lots changing hands at from 3½c. to 3c. per pound.

Calves.—There were only a few calves in, and these were very small and inferior, ranging from \$2 to \$5 each.

Dressed Hogs.—The weather we have had has had one beneficial effect on the market, the cleaning up of all small lots and tail ends, and it is refreshing to see once more the fresh, bright-looking "porker" instead of the dull, dingy specimens arriving of late. A considerably better feeling is apparent in this line, one dealer stating yesterday that his offer of \$4.65 per cwt. in car lots had been refused, and no counter offer had been made less than \$4.75 per cwt. From this it would appear that an upward tendency may be expected from this time on. Packers are all very busy cutting up, and receipts since the cold weather set in have been rapidly disposed of. Contracted lots are still being received at \$4 per cwt., but all new business is being done on a much firmer basis; car lots, \$4.60 to \$4.75; carcasses and jobbing lots, \$4.85 to \$5.10 per cwt.

Poultry.—The Christmas trade pretty well cleaned the market of all offerings, and good, choice, bright, dry-picked turkeys readily make up to 9c. per lb. We heard of several small lots of ready goods being offered as low as 5c. without takers. Receipts have been light since the holidays. Geese, for choice sorts, meet a good demand, the poorer qualities not being wanted; the better birds, however, being very scarce. Turkeys, 7½c. to 9c. per lb.; geese, 5½c. to 6c. per lb.; chickens, 7c. to 8c.

Hides and Skins remain steady at the recent reduction:—No. 1, heavy and light, 9½c. per lb.; No. 2, 1½c.; calf skins, 6c.; and lamb skins, 7c. each.

Shipments.—Shipments from Portland last week were 371 cattle, 1,926 sheep; from St. John, N. B., 381 cattle and 979 sheep.

Chatty Stock Letter from Chicago.

(BY OUR SPECIAL CORRESPONDENT.)

Top prices at present, with comparisons:—

CATTLE.	Present Two weeks		1895.
	prices.	ago.	
1500 lbs. up	\$ 4 90	\$ 4 65	\$ 5 80
1350 @ 1500	4 75	4 70	5 35
1200 @ 1350	4 50	4 50	5 30
1050 @ 1200	4 45	4 40	5 15
900 @ 1050	4 50	4 40	4 50
Stillers	4 20	4 25	4 00
Stks. and F.	3 65	3 75	4 50
Canners	4 25	4 00	...
Pat cows	2 30	2 25	2 25
Bulls	3 50	4 00	4 50
Calves	7 00	6 00	5 60
Texas steers	4 25	3 80	4 45
Texas C. & B.	2 60	2 80	3 75
Hogs.			
Mixed	3 85	3 57	4 60
Heavy	3 90	3 57	4 75
Light	3 90	3 57	4 40
Pigs	3 70	3 55	4 15
SHEEP.			
Natives	3 65	3 75	4 00
Western	3 35	3 25	3 30
Texas	3 60
Lambs	5 00	4 50	4 50
May Corn	28½	27½	47½
Wheat	58½	58½	58½
Oats	19½	19	31
Pork	9 35	8 85	11 95

J. P. Gillett, of Elkhart, Ill., had in sixteen head of 1,600-lb. high grade Shorthorn cattle, which sold to Eastman at \$4.90. The cattle market is in healthier tone than it was before the holidays. On one day native steers sold at \$3.20 @ \$4.75, bulk \$3.95 @ \$4.60; Texas steers, \$3.45 @ \$4.00; twenty-four loads of 790-lb. old Mexico cattle sold at \$2.75; native cows and heifers sold at \$1.60 @ \$4.00, bulk \$2.30 @ \$3.00; bulls and oxen, \$2.00 @ \$3.75; veal calves, \$3.25 @ \$6.75; and stockers and feeders, \$2.50 @ \$3.70.

The advance in fat cattle is raising feeding cattle beyond the point that country traders like to pay.

The opinion that the supply of fat cattle ready for market is short is rapidly gaining adherents. A man who is in a good position to know, and who devotes all of his time to finding out, says there are fewer cattle ready for market than many people suppose.

There were 46,681 Mexican cattle imported into the United States in December, 1895, making for the year, 338,663.

J. C. Stribling, of Llano, Texas, insists that the number of cattle on feed in Texas is more than 40 per cent. short of last year.

Half the cotton oil mills in Texas are shut down; 25 per cent. of the fed cattle have been marketed, and no cattle are being put in for second feeding.

Texas owners are not blue because of bad prices for beef cattle, but will feed until the market improves. Yearlings are now held at \$10.00, and two-year-olds at \$14.00.

U. S. cattlemen were generally surprised at the big showing made last year by Canadian exports of live stock, especially of cattle from the Northwest.

The 151,136 hogs received here the first week of the new year averaged 237 lbs., the lightest average since the week ending Nov. 2.

It is estimated that receipts of hogs at Chicago the first three months of 1896 will fall at least a quarter of a million under the corresponding period last year.

Kansas City expects about 400,000 hogs for January and February, against 499,000 the corresponding two months of 1895.

The hog market is very erratic, but good judges think it is on the eve of a big advance. Some Chicago speculators are talking about \$6 hogs by spring.

Official receipts of cattle, hogs and sheep at the under-mentioned markets since their opening:—

	CATTLE.	HOGS.	SHEEP.
Chicago	49,214,653	152,779,500	30,080,121
Kansas City	16,846,535	33,707,545	5,526,182
East St. Louis	9,313,022	18,416,297	5,129,008
Omaha	5,611,014	13,394,482	1,672,862
Grand total.	70,985,264	218,297,824	42,408,173

Receipts for the new year so far are showing a decrease nearly all around, compared with a year ago.

The sheep market is all right, if one may judge by the very active demand there seems to be for good grades of sheep and lambs. Some choice lambs, 87 lbs., sold at \$5, the highest since September 24. However, the weakness of the foreign demand is making some of the sheep feeders feel uneasy. Last year, from January to May, prices advanced nearly \$2 per hundred, but no such improvement is anticipated this year. There are decidedly more sheep in sight than the demand can take care of, unless there is a stronger inquiry from foreign markets. It is reported that the home supply in England is about up to the normal, which, if true, will leave room for a good many of our sheep, unless South America comes forward with a good many; but this is the summer season in Argentina and not many will come to compete with our sheep from that source. The quality of the sheep sent to Europe this year no doubt will show a great improvement.

There was no quotable change in the horse market. In the regular auction sale, drafters sold at \$70 @ \$100, principally around \$100; drivers, \$50 @ \$170; chunks, 1,300 to 1,400 lbs., \$80 @ \$110; light horses, \$25 @ \$50. The foreign demand for horses is quite good. The U. S. Government is now buying a large number of cavalry horses.

Toronto Horse Market.

Trade in horses is looking brisk, and there is an active demand for good, upstanding horses of best description. Drafting horses of good quality, size and weight are constantly demanded, about 1,500 lbs. and upwards, suitable for heavy delivery; otherwise trade is very quiet. Mr. Chas. Burns, of Adelaide street, and Messrs. Aikens & Flanigan, the cattle exporters, are putting together a very fine string of horses. It is his intention to ship the lot to the Old Country in the spring, where he thinks he can find ready sale for them. The lot includes Geneva 2,111, Johnny Goldust 2,17, Hildeburn 2,18, King Forest 2,21, Lisbon 2,30, Gertie B. 2,13, Harry B. 2,171, Eva 2,25, Bella Cooke 2,28, Jardine and Cleofreda three year old. A few days ago Mr. Matthews, of Illinois, made an offer of \$1,500 for Geneva, but was refused, as Mr. Burns thinks nothing less than \$6,000 would persuade him to part with the speedy son of Leland and Bessy Forest. The mare Eva is the one to which attention was drawn some weeks ago when she was bought at the dispersion sale. Harry B. is the greatest winning Canadian trotter of the year, the amount being \$3,640. Hildeburn (2 18) is quite a good performer. He is by Cheltenham by Oxmoor, sire of several 2:30 performers. Brunheide, the dam of Hildeburn, is by the great Hambletonian, out of Dolly Mills; therefore, by his gilt-edge breeding, should be a star performer, and is now in grand fettle. Bella Cooke and Eva make a splendid pair, and Mr. Burns has been offered \$800 for them. The bay pacing mare Gertie B., race record 2:13, is every inch a trotter. In 1891 she started in seventeen races and won a large proportion of them. At Detroit, in June last, she landed the 2:15 class, after a desperate seven-week struggle. Jardine was also bought from Hamilton men. There is no doubt that this shipment will be watched with interest by all Canadian horsemen.



THE HEART OF THE CRUSADER.

BY PHILLIS PEYTON.

"Any success, dear? But I see from your face that you have had none."

"No," was the weary answer, given by a weary man. "And the time is getting short. Soon, very soon, we must leave our home—the home of my forefathers for generations."

"Dear, you must not despair. Even yet the precious papers may be found."

"No, Isabel, I have lost all hope. To-day (the men of my acquaintance would simply laugh at me, I know, but to you, my wife, I can confide my innermost thoughts)—to-day the knight appeared."

"The knight! Who is he?"

"Have you never heard the traditions of our family? But no, I forgot that I have not told you this, lest you might feel nervous. Well, in the time of the Crusaders one of our ancestors fell before Acre. He seems to have been very much attached to his English home, for he left behind a paper in which he requested that his heart might be buried under the great Hall of the Castle. His request was attended to, and that may be the reason for his strange appearance. Anyhow, it is said that at all family crises he walks up and down the Hall. All my life I have laughed at the story, but yesterday I saw him for myself. There is no doubt, I fear, that he was sent to warn me of coming misfortune, and of course misfortune means to us the loss of the estates."

The Lady Isabel Percie had listened attentively to her husband's tale, and if he had not been preoccupied he would have noticed signs of unwonted excitement in her sweet face. There was cause enough for Sir Hector's depression. From time immemorial his forebears had lived in their northern home. It was a lovely place close to the border, standing amidst scenery scarcely to be equalled in the whole of England, and its present owner loved it with all his heart. He was fond of filling it with guests, and especially since he had brought home his bride, the gentle daughter of the Earl of Dundrummond, he had kept open house. Of a generous, unsuspecting nature, he had no idea that in inviting to the Castle a distant cousin he might be working himself ill. To this man he one day laughingly confided that his own title was rather shaky *legally*, for the old documents and deeds proving the right of his branch of the family to the estates had been missing for no one knew how long. "Still," he added, "I don't think anyone would be bold enough to try to dislodge me, eh, John? That would be too good a joke."

The guest made some rejoinder which Sir Hector did not catch, and he never gave the matter another thought until one morning, to his utter astonishment and indignation, he received a letter from a solicitor saying that John Percie had made a claim for the estates, and requiring him to make good his own.

Since then a strict but vain search had been made for those ancient legal documents on which so much depended. Sir Hector knew well that without them it was of no use to attempt to defend himself, and he had agreed to give up his heritage within a certain time, should they not be found.

Until the afternoon of the conversation recorded above he had not lost hope; but now he was in despair. Not so Lady Isabel. She was not in the least frightened or distressed by the story of the appearance of the Crusader. To her husband's surprise she asked: "Do you think I could see him? I should very much like to do so."

"It is possible," he replied, "for he was certainly very visible when I came up to you. Come into the gallery and watch."

Overlooking the great Hall of the Castle was an ancient minstrel's gallery, to which the husband and wife now directed their steps. At first there was nothing to be seen, but presently they heard measured footsteps pacing backwards and forwards, and the clank, clank of a sword sounded on the stone floor; and in a few moments the figure of the knight in armor with the Crusader's Cross on his arm loomed through the dusk of the wintry afternoon. His face was uplifted and his eyes seemed to be fixed on Lady Isabel, while his hand pointed downwards. Sir Hector drew closer to his wife, but she betrayed not the least fear. Instead, she smiled joyfully and said: "My husband, I do not believe so good a man would be the messenger of misfortune. I take his appearance as a good omen."

Sir Hector had been out all day hunting. Lady Isabel had told him that she would like to take day's turn at the search, and that he would be better out of the way. He had smiled at her sadly, but had not been able to resist one more run after the hounds in the neighborhood he loved so well. He came in tired and wet, but the hard exercise had done him good—he was in better spirits. To his surprise, when he entered the Hall he found his wife waiting there.

"Why, Isabel dear, how is this? Have you been here long? You will be chilled to death with cold, and besides," he whispered, "there is the ghost, you know!"

"The ghost," she solemnly replied. "The ghost will never appear again, Hector. Come into the library; I have something to tell you."

"When you went away this morning," she said, "I told you I meant to have a search, and—Hector, I had a clue to the hiding-place and my search was rewarded."

"What? You don't mean to tell me—no, Isabel, you cannot mean that you have found the deeds!"

"But indeed I have—here they are." And she showed him a rusty iron box, inside of which were the clear proofs of his title.

"Oh, Isabel, you are indeed my good angel," he cried. "How shall I ever thank you! How could you find a place which I had overlooked?"

"I told you I had a clue," she replied. "As it happens, I have studied very carefully the circumstances of the appearances of many so-called ghosts. I found that they always come for some reason and that when their work is done they vanish. So when you told me about the Crusader I at once felt he had something to do with our troubles about the missing deeds. I found that he was a good man, so I gathered that he was meant to do a good work. When we saw him yesterday afternoon he was pointing downwards, and he never moved more than five paces from the middle of the Hall in any direction—I counted his footsteps. I guessed immediately that here was the solution of the mystery, and I persuaded you to go out to-day on purpose. I had workmen in, who, under my direction, took up and dug under the middle of the floor. I pretended that I wanted to find the heart of the Crusader. Sure enough, we did find it—see, it is here in this casket—but by its side (buried, surely, by some mad ancestor of yours, Hector?) was the iron box containing the deeds. Now, my darling, you will be able to snap your fingers at that most treacherous kinsman of yours; and we will put back, lovingly and reverently, to its ancient burying-place, the heart of the Crusader."

THE CHILDREN'S CORNER.

A "Proverb-Hunt" will now begin this column. A prize is offered for correct solutions of the first three pictures. Only children of subscribers may compete, and competitors must be under sixteen years of age. Answers should be sent in for each group, e. g., 1-3, 4-6, 7-9, etc. A prize is offered for each group of three pictures, and a better one at the end of the year for the largest number of correct answers. Letters marked "Proverb-Hunt" will not be opened until ten days after the third picture of each group is issued. The first letter opened, containing correct answers, will be prize winner; all others will receive honorable mention. Address your letters to Cousin Dorothy, as above, and mark them "Proverb-Hunt"—outside the envelope.



HIDDEN PROVERB—NO. 7.

The prize for the best original fairy tale has been awarded to Ethel Potticary (St. Thomas, Ont.), aged fourteen. The following receive honorable mention: Leila M. Webber, Peterboro, Ont.; Winnie Douglas, Strathroy, Ont.; Muriel Day, New Carlisle, Que.; Edith Taylor, Orange Ridge, Man.; Adah Melville, Fernhill, Ont.; Donnie McRae, Starbuck, Man.

The competition has been most satisfactory, thirty-five stories having been sent in. The last story received is the prize-winner.

Prize Story.

BY ETHEL POTTICARY.

Zola's head rested confidently against the shoulder of her lover as they sat together in a leafy bower. The balmy evening zephyrs wafted the delicate perfume of the wild rose; the moonbeams shone on the flowers and encircled the lovers with a halo of light. Both seemed rapt in pleasant thought, but suddenly a shadow passed over the face of the young girl. "Carlo," said she, "it may be foolish, but I have been alarmed of late. Three times have I heard the call of the black swan, and last night an owl perched on my window and thrice it awoke me from my slumber." Though Carlo laughingly kissed the trembling lips, he was alarmed, for a monster called Eucis had his home away in the mountains, and, according to the popular superstition, had been crossed in love and since then had done all he could to destroy the happiness of others. Distant claps of thunder gave warning of an approaching storm, and Carlo took Zola home, then, promising to see her at the ball, departed.

When Carlo reached home his clothes were drenched. He crept in, softly closing the door behind him, pulled off his heavy shoes, and went noiselessly up the stairs. But Mr. Fenesti was sharper than his son thought, and, sitting in his library, had heard both his departure and return. "Ha!" thought the old gentleman, "though I can't find out where the young scamp goes, I'll be even with him yet. Why, just the thing!" he ejaculated, as a sudden thought struck him. Creeping cautiously out into the hall, he returned with his son's muddied boots. "Now," thought he, "I'll know which of the fork roads he took. Sand! Then it's the road to the left. But hold on, there's clay under it. He's been as far as the old sawmill, anyway. Now I have it: it's Zola Cantello, the Italian's daughter, he goes to see. Who'd have thought it?" and, chuckling to himself, the old man crept into bed.

How long Carlo slept he knew not, but the storm suddenly ceased and he awoke with a start. A light brightened his room for an instant, and three times a voice said: "Go not to the ball!" Then, after a pause: "When you discover the mystery concerning this ring it will enable you to obtain that which you most desire." A little fairy appeared, dropped a ring, and vanished. Carlo was now wide awake. He rubbed his eyes and looked about him, then picked up the ring, which was proof that he had not been dreaming. There was nothing remarkable about its appearance—simply a broad golden band.

The ball-room was dazzling in its brightness. The various-colored dresses and the jewels which caught the light added to the brilliancy of the scene. As Zola Cantello entered the room, attired in shimmering white, many eyes were fixed upon her, and Carlo's brightened when he saw the flowers he had given her nestling among the laces at her snowy throat.

(TO BE CONTINUED.)

THE QUIET HOUR.

The Best Way.

It is better to sing than to sigh.
Lest, I will tell you why.
If you sing with a cheerful, joyful strain,
The world will listen and share in your glee.
And, perchance, will happier, holier be,
But 'twill give no heed to your pain.

It is better to sing than to sigh.
When tears are blinding the eye,
How can you see the exquisite things
Shining in earth and air and sea,
Beautiful shades blent in harmony,
Lifted on limitless wings?

It is better to smile than to sigh.
Rise and look into the sky.
Who reigns? Who rounded the world in his hands,
Then sent it off rolling among the spheres?
And say, do you think that He understands
How best to fashion your flying years?

It is better to smile than to sigh.
Now tell me, I pray you, why,
Since God is good, we know of a truth,
And His breath is the winds that blow,
Do we welcome the soothing gale from the south
And shrink from the north winds so?

—Harriet Warner.

Carrying God's Sunshine.

There are some places in the world where the sun rarely shines, and others where the sunlight is almost perpetual. So it is with people; some lives are so clouded that the sunlight only peeps through once in a while, and is soon eclipsed by some obscuring event. The silver linings are so tarnished by sin, or affliction perhaps, as not to be visible to them. Then there are others, God bless them, that to look upon does one good; such sunny, happy faces, made in the very image of God, carrying joy and peace wherever they go, weaving a net of happiness about them, and drawing people into it unawares, who, if they have any trials and disappointments, never let any one know them; who

"Give others the sunshine,
Tell Jesus the rest."

What boundless good these fortunate ones do when they consecrate the sunshine in their lives to Christ, when it is God's sunshine which emanates from them instead of merely a sunny nature. In everything in nature there is a counter agent, a destructive and a restoring agent. In electricity, the positive and negative poles meeting produce the desired result. There are contrary forces all around us. So people are differently organized; one nature offsets another; one disposition, perhaps, with which we are brought into contact, supplies a need which we feel in our own. God, with His infinite knowledge, has ordered all things and has ordained the counter influences to which we are subject. God has given these sunny natures to be used for Him; He never means a light to be hidden under a bushel; and so, if you are a bit of His sunshine, you are meant to go out in the world and illuminate the sad natures, you are to bring healing to the sin-sick soul, you are to carry consolation to the afflicted; oh, you are to be used in so many ways!

We must remember it is not the great things alone that count; it is the little things, the homely, everyday acts of our lives. Do not be discouraged if you do not see great results of your labors; do your part. However small and insignificant it may seem to you, it does not seem so to God. It's a part of His great plan. If the niche God has given you to occupy is not an exalted one, make it one from which the love of Christ will shine forth as a beacon in the world.

From Shadow to Sunshine.

AGNES L. PRATT.

I learn as the years roll onward
And leave the past behind,
That much I have counted sorrow
But proves that our God is kind;
That many a flower I longed for
Had a hidden thorn of pain;
And many a rugged by-path
Led to fields of ripened grain.

The clouds but cover the sunshine,
They cannot banish the sun;
And the earth shines out the brighter
When the weary rain is done;
We must stand in the deepest shadow
To see the clearest light,
And often from wrong's own darkness
Comes the very strength of right.

The sweetest rest is at even,
After a wearisome day,
When the heavy burden of labor
Has been borne from our hearts away.
And those who have never known sorrow
Cannot find the infinite peace
That falls on the troubled spirit,
When it sees, at last, release.

We must live through the weary winter
If we would value the spring;
And the woods must be cold and silent
Before the robins sing.
The flowers must be buried in darkness
Before they can bud and bloom;
And the sweetest and warmest sunshine
Comes after the storm and gloom.

So the heart from the hardest trial
Gains the purest joy of all,
And from lips that have tasted sadness
The sweetest songs will fall.
For as peace comes after suffering,
And love is reward for pain,
So after earth is heaven—
And out of our loss the gain.

UNCLE TOM'S DEPARTMENT.

Rembrandt.

Rembrandt is a name to conjure with in the world of art. His chief works, with very few exceptions, are treasured in public galleries or celebrated private collections; and if by any casualty any one comes into the public market, the competition for it is so great that it is impossible to give a correct estimate of its value.

Rembrandt was the son of a miller, Herman Geritsy van Rhyn; that is, of the Rhine, because his mill was situated on a branch of that river, near Leyden. Rembrandt's father, a man in easy circumstances, sent his son to the university to graduate in Greek and Latin, but, as in many other cases, the innate art capacity was too strong to be thwarted, and the youth is soon heard of working enthusiastically in the studio of one or other of the men of note of his day; but, as for Homer's birthplace seven cities of Greece contended, so numerous writers have striven to place the young Rembrandt with some private master, as if the genius of the scholar were reflected back upon the instructor. It matters little; Rembrandt stands alone; the source of his art is so distinctively individual that it is impossible to trace the influences of other minds upon his work. On returning home from his futile university course, Rembrandt, already an artist in all but repute, speedily began to be recognized. Holland was at this time the resort of many amateurs of the arts, both native and foreign, and it was scarcely possible for a sketch or etching from a hand like his to get into circulation without attracting notice. One of his first pictures having drawn the attention of some who could estimate its merits, he was advised to take it to the Hague and submit it to a wealthy amateur there. Young Rembrandt's work received a cordial welcome, and a hundred florins well-nigh turned the head of the artist. He had journeyed to the Hague on foot. Now, eager to carry the glorious news home, he hired a post chaise, and refusing to pause at the usual stopping places for meals, he would only permit a hasty bait for the horses, and urged on his journey till he reached Leyden, when, jumping hastily from the carriage where the tired-out horses stopped, he rushed homeward with his treasure.

At twenty-one we find Rembrandt at Amsterdam with a growing reputation, attracting students to him from all quarters, to whom he gave the most thoughtful care in instilling his own principles of art, encouraging originality by especial arrangements in instruction. He soon married a village maid of Ransdrop, with no fortune but a rosy face. Unhappily, this superiority to mercenary motives was not exhibited in the subsequent career of the artist, and Rembrandt's love of money is as widely celebrated as his art. One of his biographers declares that he was a regular Jew in his dealings with the public, and that the tricks that he resorted to in raising the price of his works were worthy of Nathan or Moses. He has been known to bid himself for his own engravings against eager customers, and often commissioned his son, in disguise, to sell them as stolen goods. According to the same authority, he once circulated the report of his own death, for the sole gratification of coming to life again amongst the startled and terrified heirs of his portfolios, now rendered priceless by the supposed death of the artist. He was extremely capricious in his dealings with purchasers. Bidders were required to cajole and flatter him, as well as offer large sums for his works, and he has been known to refuse a hundred florins for an engraving when the offer was unaccompanied with some personal compliment.

Unattractive as may be many of the recorded traits of the great artist's character, there is no question as to the power and charm of his work: at once a poet in his realism; a sublime painter, and an inimitable engraver; no one has approached him in the essential points of mastery of light and shade, otherwise called chiaro-oscuro, in delicacy of touch and impressiveness of effect. In later life, when time had given certainty to his hand, Rembrandt's boldness of execution was often wonderful. The dash of his brush cast apparently rudely and at random upon the canvas, like mortar on the wall, hit the mark so truly that it gave, as if by magic, character, motion, life; made the nostrils breathe and the eye moisten; but in his earlier productions he finished his works most carefully. The example of the master, which we have here reproduced from an old monochrome of over sixty years ago, is a fine sample of apparently one of his earlier works, exhibiting some of those special qualities of rich contrasts and harmonies of light and shade with which the name of Rembrandt is synonymous.

Puzzles.
Send all puzzles direct to Ada Armand, Pakenham, Ont., who is in charge of this Department. Leave envelopes open, mark the left-hand corner "Printers' Copy," and the letters will go for one cent. UNCLE TOM.

1—METAMORPHOSES.
(Change one letter at a time.)
Exchange man to boy in three moves;
" pin to tie in two moves;
" well to sick in four moves;
" book to card in four moves;
" vase to bank in three moves. LILY DAY.

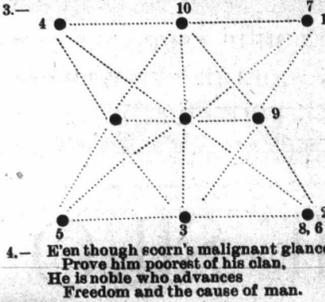
2—RHYMED DECAPITATIONS.
1. High roars aloft the —,
Nan sings gaily to her —,
Echo answers o'er and —,
2. Loud, loud the breeze is —,
Softly are the cattle —,
Contentment to their pasture —. ANNIE P. HAMPTON.

3—SQUARE WORD.
My FIRST is the least whole number;
SECOND, something sweet and refined;
THIRD, liquid made solid by cold;
FOURTH, a trial made by hand or by mind. A. P. HAMPTON.

4—DECAPITATION.
Old '95 has passed away,
New '96 is here;
I wish our good old Uncle Tom
A WHOLE and happy New Year.

6—TRANSPOSITION.
My FIRST is a weapon,
My SECOND is fruit,
My THIRD is to husband,
And scanty to boot,
My FOURTH's to diminish,
My FIFTH's to obtain,
My SIXTH is in grammar,
To describe or make plain. CHAS. S. EDWARDS.

Answers to December 2nd Puzzles.
1.—Dou-glass. 2.—(1) The letter S: IX-SIX; (2) 11, 2 and 3 make 23, and 3 and 2, 32. 3.—The letter I: LIX-I=LX.



Answers to Puzzles in Dec. 16th Issue.

1.—Mention (shun). 2.—Every one.
3.—Trichinopoly. 4.—Now—Won.
5.—Rim membrane:—
M
E E
A E B
R O
N O O N I A M
O I A
N A E
A R B
R

SOLVERS.
Clara Robinson, Lily Day, A. P. Hampton, J. S. Cramer, M. H. Bull.

The prizes for best original puzzles during the last three months have been awarded to Charlie S. Edwards, 1st; H. D. Pickett, 2nd; Lily Day, 3rd. The prizes for answers during that time go to Clara Robinson, 1st; Bertha Jackson, 2nd; Chris. McKenzie, 3rd. Will H. D. Pickett let us know if he received his prize, as there may have been a mistake in the address. Uncle Tom now offers the following prizes for the next three months, viz., January, February and March:—

For best original puzzles, 1st, photo group of puzzles in '95; 2nd, cloth-bound book; 3rd, cloth-bound book. For answers: 1st, photo group; 2nd, book; 3rd, book. The competition for answers was very close, although the number of competitors was not as large as in former years, but I hope to see it increase during '96.

The Dearest One in All the Earth.

"She was of that better clay,
Which gently treads this earthly stage."

Mother,
In line or language there is no other
Word that tells so clear a story,
Of life and love and living glory,
Like that sweet word,
So often heard,
And yet so little known
Until into our soul-life grown,
As that which names the precious one,
Who only knows her duty done,
When she has folded to her breast
Her offspring for a longed-for rest;
She who has fought the prize to win,
For a noble life and an entering in
Through the gates of heaven.

By promise given,
Of yielded life for love, of love for love,
For bringing blessings from above,
Lifting her offerings up on high,
Ready for them to do and die;
And this brief verse
Would fain rehearse
The virtues and the modest worth
Of the dearest one in all the earth—
Mother.

Picked Up in Passing.

Hungry men think the cook lazy.
Honey is sweet, but the bee stings.
No fine clothes can hide the clown.
Marriage and hanging go by destiny.
Of soup and love, the first is the best.
Fish and guests smell at three days old.
If it were not for hope, the heart would break.
Much corn lies under the straw that is not seen.
Fortune knocks once at least at every man's gate.
Never venture out of your depth till you can swim.
Men may blush to hear what they were not ashamed to act.
Marry your sons when you will, your daughters when you can.
No mother is so wicked but desires to have good children.
Most things have two handles, and a wise man takes hold of the best.



BY REMBRANDT.

Unlike other years, our column seems
Deserted almost by all.
Is it FIRST, you naughty veterans,
That you never make us a call?
Sir Reeve, Fairbrother, Blyth, and
Miss Smithson, is it true,
That you have all gone to Texas?
Pray! what find you there to do?

I fear your hearts have hardened,
Down in that Southern clime,
For you never heed our pleadings
To send along some rhyme.
Well, I do not mean to lecture,
Nor yet pretend to preach,
But simply what I wish to say, is
A happy New Year to each. LILY DAY.

5—CHARADE.
The ADVOCATE so wise and true
Has proved its TOTAL once again,
By adding to its staff and crew,
Our cousin Ada's clever brain.
I FIRST the last will flourish now,
And bet the boys the lead will take,
For don't you see it now will be
But fun to write and puzzles make.
Dear Uncle Tom resigned his post,
He thought it was a clever plan;
And so do I, and blithely cry
With all the boys, "God bless the man."
But he, I hope, has not a thought
To leave his nephews and his nieces,
But to the end does aye intend,
With faithfulness and love, to keep us.
And won't we storm our cousin A.
With letters by the dozens;
And welcome back Miss Lily Day,
And send our love to all the cousins. CHAS. S. EDWARDS.

To any of our subscribers furnishing the required number of names we will send per mail or express, as most convenient, the following premiums, charges prepaid on all except Animals:

"Canada's Glory" Our New Premium Picture!

A beautiful engraving representing eleven of the grandest light horses in Canada. Should adorn the drawing-room of every lover of the horse. Will be a life-like and popular work of art, unequalled in live stock portraiture.

HOW "CANADA'S GLORY" MAY BE OBTAINED:

Any subscriber sending us one new subscription for the FARMER'S ADVOCATE, accompanied by \$1, will receive a copy. Price, 50c. Copies of "Canada's Pride" or "Canada's Columbian Victors" may still be obtained by sending us the name of one new yearly subscriber for each. Price, 25 cents each.

THE SILO and ENSILAGE== New Book Premium. How to grow Ensilage Corn.

How to build, fill, and feed from a Silo. Most complete work yet issued.

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<p>INTRODUCTION. CHAPTER I.—SILAGE CROPS. A. Indian Corn. Development of the Corn Plant. Varieties to be Planted for the Silo. Methods of Planting Corn. Thickness of Planting. Planting in Hills or in Drills. Sowing Corn Broadcast. Preparation of Corn Land. B. Clover. Time to cut Clover for the Silo. C. Other Silage Crops. CHAPTER II.—SILOS. General Considerations. Descriptions of Different Kinds of Silos. 1. Pits in the Ground. 2. Silos in Barns. 3. Separate Silo Structures. A. Wooden Silos. Circular Wooden Silos. B. Stone or Brick Silos.</p>	<p>C. Grout (Cement Concrete) Silos. D. Stave Silos. E. Metal Silos. F. Silo Stacks. Preservation of Silos. Cost of Silos. CHAPTER III.—SILAGE. Filling the Silo. Cutting the Corn in the Field. Whole vs. Cut Silage. Siloing Corn "Ears and All." The Filling Process. Fast or Slow Filling. Covering the Siloed Fodder. Dry Silage. Clover Silage. Freezing of Silage. Cost of Silage. Chemical Composition of Silage. The Relation of Moisture and Acidity in Silage. Sweet vs. Sour Silage. Digestibility of Silage. Losses of Food Materials in the Silo.</p>	<p>Losses in Field-Curing Fodder Corn. Necessary Losses in the Silo. Necessary Losses in Siloing Clover. CHAPTER IV.—FEEDING OF SILAGE. Silage for Milch Cows. Silage for Steers. Silage for Horses. Silage for Sheep. Silage for Swine. Silage for Poultry. CHAPTER V.—COMPARISON OF SILAGE AND OTHER FEEDS. 1. Economy of Production. Corn Silage vs. Roots. Corn Silage vs. Hay. Corn Silage vs. Fodder Corn. 2. Comparative Feeding Experiments. Corn Silage vs. Roots. Corn Silage vs. Dry Roughage. CHAPTER VI.—THE SILO IN MODERN AGRICULTURE.</p>
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How to get a first-class Collie:



To any subscriber sending us the names of 10 new yearly paid-up subscribers we offer a young Collie, six weeks old or over, eligible to registration, and bred by Mr. R. McEwen, Byron, Ont. (See page 453, Nov. 15th '95 issue, for fuller description.)

LIVE STOCK

To those desiring pure-bred stock of any breed as a subscription prize, we are prepared to supply same on most favorable terms.

How to get the "Farmer's Advocate" FREE!

FOR SENDING us the names of 3 new yearly paid-up subscribers we will give free, 12 months' subscription to the FARMER'S ADVOCATE.

A.J.C.C. Jersey Bull Calf

(SIX MONTHS OLD.)
 For sixty new yearly paid-up subscribers, or thirty new subscribers and \$20 additional cash. Sire, Carlo of Glen Duart 15037; dam, Mina of Arklan 00224. This is a great opportunity to get a choice animal easy.

WE ARE HAVING A WONDERFUL RUN ON OUR WATCH AND RING PREMIUMS. EVERY ONE RECEIVING THEM IS PLEASED.



DUKE (PLAIN).



DUCHESS (ENGRAVED).

Read What Those Say Who Have Earned It.

To the *Farmer's Advocate*:—
 DEAR SIR,—I received your watch as a premium, and it has given entire satisfaction in every way. I will always endeavor to further the interests of your paper by sending a few names now and again.
 Yours truly,
 JACOB STOLTZ.
 NEW DUNDEE, October 23rd, 1894.

Editor of the *Farmer's Advocate*, London:—
 DEAR SIR,—The watch which you sent me for getting subscribers for your paper has given entire satisfaction, being an excellent time-keeper. I will try to get you some more subscribers.
 Yours truly,
 WM. C. WILSON.
 EAST ORO, ONT., October 23rd, 1894.

To the *William Weld Co.*:—
 DEAR SIR,—I received your letter the 23rd inst.; also, the watch came to me in good order, and I am very much pleased with it. I am endeavoring to get more subscribers for the *ADVOCATE*, but almost every farmer takes it around here.
 Yours truly,
 JOHN LONGMORE.
 CHATHAM, November 26th, 1894.

Either watch, with chain and charm, will be given to any subscriber sending us the names of three new yearly paid-up subscribers.

IF PREFERRED, WE GIVE LIBERAL CASH COMMISSION.

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

CHILDREN'S OR MISSES' REAL STONE SETTING.

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1 Pearl, 2 Garnets.
2 New Subscribers. | No. 2—Price, \$1.25.
1 Garnet.
2 New Subscribers. | No. 3—Price, \$1.50.
3 Pearls.
3 New Subscribers. | No. 4—Price, \$2.00.
1 Pearl, 2 Garnets or Coral.
3 New Subscribers. |

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5 New Subscribers. | No. 6—Price, \$3.50.
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Wedding.
5 New Subscribers. | No. 12—Price, \$6.50.
Beautifully Chased.
10 New Subscribers. |

STRATHROY

Dairy School

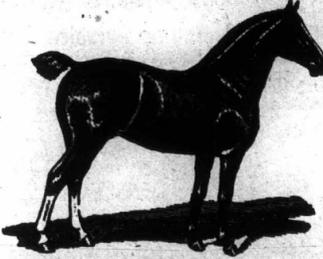
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A FINE NEW BUILDING. Complete equipment. Competent instructors. Short courses of practical instruction with lectures, commencing at different dates and practically free of charge...

F. J. SLEIGHTHOLM, Superintendent. Strathroy, Jan. 2, 1896.

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Importers and breeders of SHIRES, HACKNEYS, AND COLLIE DOGS.



The above stud, though only commenced in 1890, has achieved unparalleled success at all the leading Canadian shows...

MUST BE SOLD



A few Imported Mares in foal to Grandeur. Also a promising yearling Hackney Colt. They will be sold very cheap.

D & O. SORBY, - GUELPH, ONT. 6-2-y-om

1864. HILLHURST FARM. 1894.

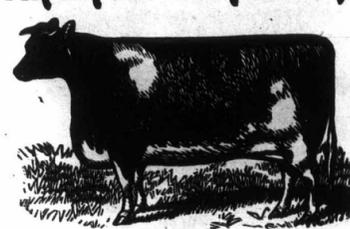
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Shorthorns, Shropshires, and Berkshires.

Having rented one of my farms, I will sell at very much reduced prices five young cows due to calve Sept. to Dec.;

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SHORTHORN : BULLS

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Breeder of Shorthorns, Berkshires and Cots-wolds. For sale at prices that must sell them: Four choice young bulls fit for service, also a few good heifers and a number of fine young Berkshire boars and sows from two to eight months old.



FOR SALE. Seven Shorthorn Bulls

fit for service, including a large Red Bull, about 24 months, from Imp. Roan Princess, and sired by the same bull as the 1st prize yearling which was awarded the sweepstakes of all ages at Toronto in 1895.

J. & W. RUSSELL, Richmond Hill, Ont. 1-om

JOHN MILLER, MARKHAM, ONT.

Breeder of Shorthorn Cattle. Five choice young bulls also heifer-by prize bull Aberdeen for sale, winners at the Industrial for best young herd of four; two of the bulls won second and third in their class. My stock are choice. Write for prices.



F. A. GARDNER, Britannia, Ont., breeder of Scotch Shorthorns, and Berkshires. Good young Bulls and Heifers for sale. Also a number of eight-weeks-old Berkshires of both sex, and choice breeding. Prices right. Correspondence solicited. 22-2-y-o

A. J. WATSON, CASTLEBERG, ONT.

(ASHTON FRONTVIEW FARM), breeder of choice SCOTCH SHORTHORNS. Young stock of either sex, and choicest breeding, for sale at reasonable prices. Correspondence solicited. 22-2-y-o

Geo. Downey & Bro., CASTLEBERG, ONT., breeders of SCOTCH CATTLE and OTS-WOLD SHEEP. A few very choice young rams for sale at low prices. No. 1 breeding and fine quality. Stock guaranteed to be as described. St. Bolton, C. P. R.; Palgrave, G. T. R. 22-2-y-o

SHORTHORNS.

I have for sale two Shorthorn heifers and two bull calves of fine breeding, fine colors, fine form and carriage, in fine condition, at fine out prices. Also one or two cows. D. ALEXANDER, BRIDGE, Lambton Co., Ont. 5-y-o



For Sale

A very fine four-year imported Shorthorn bull, Sirius-15281, bred by Wm. Duthie, Scotland, and got by the great stock bull, Leonidas-5926. This bull is of first-class breeding and No. 1 quality, deep roan in color, and will be sold at a bargain. A. F. MCGILL, Hillsburg. 22-2-y-o

HAWTHORN HERD OF DEEP MILKING SHORTHORNS.

FOR SALE-Four young Bulls, all rede, descendants of 2nd Fair Maid of Hullett-9047, with a record of 52 lbs. of milk and 2.54 lbs. butter in one day. WM. GRAINGER & SON, Londesboro, Ont. 13-y-om

2 THOROUGHBRED COWS FOR SALE CHEAP.

Forward in calf to 1st prize bull Commander-18228, and three young bulls at bargain. 12-y-om A. J. C. SHAW & SONS, Thamesville.

CARGILL HERD OF SHORTHORNS.

Have some good show material in Heifer Calves, also some grand Canadian-bred Cows and Heifers for sale. Write for catalogue. H. CARGILL & SON, CARGILL, ONT. 11-y-om

MAPLE HILL HOLSTEIN-FRIESIANS.

On account of scarcity of feed I will make very low prices on several fine heifers, some of them prize winners and bred to the great bulls Netherland Consul and Sir Pieterje Josephine Mechthilde. Remember that at the last Toronto Industrial I won every first on heifers and both silver medals, in hot competition and under the expert judgment of Mr. C. R. Payne, of New York. G. W. CLEMONS, St. George, Ont.

GEM HOLSTEIN HERD

6 MONTHS' CREDIT GIVEN. BULLS, all Registered Holsteins; quality the best, and fit to head any herd; we have them all ages. Write for particulars to

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

A.J.C.C. BULL AND HEIFER CALVES FOR SALE

ADDRESS: P. H. LAWSON, Nilestown, Ont. 23-c-om

LARGE IMP. YORKSHIRE PIGS -AND- HOLSTEIN : CATTLE.

We breed nothing but the best, and sell cheap and guarantee satisfaction, or ask no pay. Come and see us, or write for prices and be convinced. FLETCHER BROS., Oxford Mills P. O., Ontario, Kemptville Station, C. P. R. 5-1-y-om



HOLSTEINS!

WE now offer young stock that have won prizes, and calves from our show herd, from one month to one year old, whose dams have large records-any age or sex-FOR SALE, at very low prices to quick buyers. Also some Poland-China Pigs, 1 and 6 months old; same quality (the best).

A. & G. RICE, Brookbank Stock Farms, CURRIE'S CROSSING, Oxford Co., Ont. 18-y-om

FOR SALE Jersey Heifer Calves

We offer a number of beautiful heifer calves from 1 to 3 months old; all bred from our best cows, whose average the past year has been 33 lbs. of butter each, and sired by the richly-bred bull, Canada's Hero, whose dam gave 19 lbs. 5 oz. of butter in 7 days. Come and see them, or write to W. C. SHEARER, Bright, Ont. 22-2-d-om

WILLOW GROVE HERD OF JERSEYS.

Sweepstake herd of 1894. Stock from imp. bulls and imp. and home-bred dams of St. Lambert, St. Heller, and Signal strains. Young of splendid individuality always for sale; also Plymouth Fowls. Eggs, \$1.00 per sitting. Highfield St., G. T. R. 6-2-y-om J. H. SMITH & SON.

For Sale. JERSEY BULL, "RIOTER'S JUPITER"

Two yrs. old; Solid Dark Fawn, Blk. Points. Sire, Lillium's Rioter, 1st prize Toronto, Montreal, Ottawa and Gananoque, 1895.

Headed 1st prize Herd, Toronto, Montreal and Ottawa, 1895. Took Silver Medal, Toronto, Montreal and Ottawa, 1895.

His dam makes 17 1/2 lbs. butter a week, milks 20 quarts a day, and never goes dry. Dam of Rioter's Jupiter is a daughter of Lulu Delle, 1st prize and Silver Medal over all Canada. In my 1st prize Herd at Toronto and London. Was one of my three at London, winning Silver Tea Set, for three Best Dairy Cows.

Price of Rioter's Jupiter, \$25.00. Also, two bull calves, 5 and 6 months grandsons of my famous prize bull, Canada's Sir George, whose dam made 263 lbs. butter a week. Two bull calves, 3 and 4 months, g. g. sons of Massena, 664 lbs. butter in her 16th year.

MRS. E. M. JONES, 8-y-om Box 324, BROCKVILLE, Ont., CAN.

Jersey Sale!

The entire herd of A. J. C. C. H. R. Lee Farm Jerseys. Forty head of reg. bulls, cows, heifers, and calves; same number of high grade cows and heifers. Excellent chance to start a herd cheap, as they must be sold within the next 90 days. Come and see, or write to E. PHELPS BALL, 17-y-o Lee Farm, Rock Island, P. Q.

JOHN YEAGER, OSAGE AVENUE, SIMCOE, P.O.

Breeder of Choice Jerseys, Berkshire Swine, and Scotch Collie Dogs. Correspondence solicited. 6-2-y-o

JERSEY HURST HERD OF JERSEYS

ROBERT REESOR, LOCUST HILL, ONT.-Choice Jerseys for sale at all times; grand individuals of the St. Lambert and St. Heller strains. Locust Hill is 20 miles from Toronto, on C. P. R. 6-2-y-o

Prize-Winning AYRSHIRES FOR SALE.

I have at present one of the largest and best herds in Ontario, which has been very successful in the prize ring. They are deep colored and of a large size. Bulls, cows and heifers for sale always on hand.

JAS. McCORMICK & SON, ROCKTON, ONT. 20-2-y-o

IT PAYS TO ADVERTISE

FARMER'S ADVOCATE

HOME MAGAZINE.

STOCK GOSSIP.

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

Dr. E. P. Ball, Rock Island, Que., writes: "Owing to a change of business, I find that I have not the necessary time required to personally manage a large herd of A. J. C. C. H. R. Jersey cattle, and with great regret offer the entire herd of Lee Farm Jerseys for sale, consisting of bulls, cows, heifers and calves; and some exceptionally fine high-grade young cows and heifers. This herd is too well known in the Dominion to need comment. It certainly is a rare chance to procure a foundation that will stand as from this herd have been purchased some of the greatest butter cows known. It was the largest prize winning herd in the Province of Quebec in 1895. For years past individuals from this herd have sold to all parts of Canada and United States with entire satisfaction. The entire lot are healthy and in good working condition. Nearly all are of the St. Lambert stock; solid colors, good size, and rich milkers. This herd will bear inspection. Shall be pleased to welcome visitors, and correspondence personally attended to."

G. W. Clemons, of St. George, writes under date of January 4th, 1896: "Please find enclosed copy for change of advertisement in your paper. Sales have been good, considering the scarcity of feed in this district. Since September 1st, I have sold to Mr. James Rosebrugh, St. George, the cow Bailie 2nd, and her beautiful heifer calf by the silver medal bull, Netherland Consul. Bailie 2nd was granddam of Emory Prince, first prize aged bull at all the great fairs this last year. Mr. Rosebrugh also purchased all my grades, and he is much pleased with them, finding them superior to his Shorthorn and Ayrshire grades for dairy purposes. To head the pure-bred herd of Mr. Neil Sangster, Ormstown, Que., I sent that grand bull calf, White Prince, winner of second at Toronto and Gananoque, third at Montreal, and first at Ottawa, where he very nearly captured the sweepstakes. He is rich in the Artis and Aaggie blood, and is good enough to win anywhere. His dam is Vida Princess, which I sold a short time ago to Mr. John Beeman, St. George. She is a heavy and persistent milker, and a breeder of uniformly good calves. That wonderfully good show bull, Netherland Consul, winner of first prize at Toronto and London, in 1894, and at Toronto, Montreal, Ottawa and Gananoque, in 1895, has been secured by Mr. R. S. Stevenson, of Ancaster, to head his choice herd, and if all goes well he will be lot more winning. I have made several more sales which I will report later. I have lately had dropped in my herd a calf of such notable breeding that it may interest some of your readers to read of it. The sire of this calf (a heifer) is DeKol 2nd's Butter Boy, whose five nearest female ancestors have butter records which average nearly 33 pounds in a week, and who won first prize at the New York State Fair in 1895. The dam of this calf is Mordamin's Daisy Barrington, winner of first as a calf at Rochester, Oswego, and Sandy Creek, N. Y., and first as a yearling at Toronto, Montreal, and Ottawa. She has given, at twenty-six months old, 62 pounds of milk in a day, and 14 1/2 pounds in a week, which is the best record ever made in Canada by a heifer of her age of which I have any knowledge."

NOTICES.

IRRIGATION IN DAKOTA

Is causing that much maligned section of the Western country to blossom like the rose. Quoting from a published article on the subject, it is stated that "Men who are accustomed to farming in non-irrigated districts are slow to believe the reports of enormous yields of all kinds of farm products in those sections of the country where irrigation is practiced." An irrigated 40-acre farm produces greater and better results than a 640-acre farm cultivated in the ordinary way. In a few weeks we hope to be able to publish various items getting to farming in irrigated districts are slow to believe the reports of enormous yields of all kinds of farm products in those sections of the country where irrigation is practiced. An irrigated 40-acre farm produces greater and better results than a 640-acre farm cultivated in the ordinary way. 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Annual Meeting of the Dominion Swine Breeders' Association at Guelph, Ont.

The annual meeting of the Dominion Swine Breeders' Association was held in the City Hall, at Guelph, on Dec. 12th. The chair was occupied by the President, Mr. Daniel De Courcoy. After the presentation of the Secretary's report, the business of the meeting was proceeded with.

ELECTION OF OFFICERS.

The following gentlemen were elected for the ensuing year: President, J. E. Brethour, Burford; Vice-President, Geo. Green, Fairview; Secretary-Treasurer, F. W. Hodson, Guelph. Directors for the different breeds: Yorkshires—G. B. Hood, Guelph; Berkshires—Thos. Teasdale, Concord; Suffolks—R. Dorsey, Burnhamthorpe; Chester Whites—H. H. Harding, Thorncliffe; Poland-Chinas—W. Jones, Mt. Elgin; Essex—Jos. Featherstone, Streetsville; Tamworths—Andrew Elliott, Galt; Duroc Jerseys—W. E. Butler, Dereham Centre. General Director—J. C. Snell, Snelgrove. Auditors—Jno. I. Hobson, Mosboro, and R. Snell, Edmonton.

DELEGATES TO FAIR BOARDS.

Toronto Industrial—Thos. Teasdale, Concord; J. E. Brethour, Burford. Ottawa—Jos. Featherstone, M. P. P., Streetsville, and Jos. Yuill, Carleton Place. Kingston—J. M. Hurley, Belleville; B. H. Frink, Napanee. Belleville—J. M. Hurley, Montreal. Geoffrey Beaudet, Valleyfield, F. Q.; Wm. Tait, St. Laurent, P. Q. Peterborough—R. Vance, Ida. Guelph—G. B. Hood, Guelph; James Anderson, Guelph. London—Geo. Green, Fairview; R. H. Harding, Thorncliffe.

EXPERT JUDGES.

The following list of expert judges was recommended for the different fair boards to select from.

Berkshires—W. A. Graham, Parkhill; E. E. Martin, Canning; H. J. Davis, Woodstock; J. C. Snell, Snelgrove; Thos. Teasdale, Concord; Jas. Main, Milton; Geo. Green, Fairview; Thos. Wilkinson, Hamilton; R. T. Lang, Oak Lake, Man.; Elias Leathersdale, Morden, Man.; A. Johnston, Greenwood; T. A. Cox, Brantford; Jas. Quirie, Delaware; Jas. Elder, Virde; Robt. Vance, Ida; R. Dorsey, Burnhamthorpe; Jos. Featherstone, Streetsville; S. Coxworth, Whitby. Yorkshires—Sharpe Butterfield, Windsor; J. E. Brethour, Burford; G. B. Hood, Guelph; H. E. Eire, Harrow; Jos. Featherstone, Streetsville; G. A. Gilroy, Glen Buell; H. E. Sharpe, Ida; A. F. McGill, Hillsburg; J. G. Mair, Howick, Que.; G. Beaudet, Valleyfield, Que.; J. Y. Ormsby, Toronto; J. M. Hurley, Belleville; George Gler, Grand Valley; R. H. Harding, Thorncliffe. Whites—J. E. Brethour, Burford; Geo. Green, Fairview; J. C. Snell, Snelgrove; W. Jones, Mt. Elgin; R. H. Harding, Thorncliffe; R. Dorsey, Burnhamthorpe; D. De Courcoy, Bornholm. Poland-Chinas—Jas. Main, Milton; Jos. Brethour, Burford; Sharpe Butterfield, Windsor; S. H. Todd, Wakeman, O.; Thos. Teasdale, Concord; Jos. Featherstone, Streetsville; Geo. Green, Fairview; R. Dorsey, Burnhamthorpe; H. Snary, Croton. Duroc Jerseys—Jos. Featherstone, Streetsville; Peter Lemarsh, Wheatley; W. Jones, Mt. Elgin; R. Dorsey, Burnhamthorpe; J. G. Snell, Snelgrove. Tamworths—Andrew Elliott, Galt; J. F. Master, New Dundee; A. C. Hallman, New Dundee; Frank Sharpe, London; Jno. Bell, Amber; D. G. Hamner, Mt. Vernon; Jno. Nichol, Hubrey; J. E. Brethour, Burford; Caldwell Bros., Orchard; J. S. Revell, Putnam; Walter Elliott, Hamilton; H. H. Freeman, Hamilton; A. Elliott, Pond Mills. Essex—Geo. Green, Fairview; Jas. Main, Milton; J. C. Snell, Snelgrove; Jas. Anderson, Guelph. Suffolks—Geo. Green, Fairview; Robert Vance, Ida; Sharpe Butterfield, Windsor; Jno. Thompson, Uxbridge; Jno. Groat, Edmonton; Malcolm MacArthur, Lobo; Simon Lemon, Kettleby. R. H. Harding brought a motion before the meeting, seconded by Jos. Featherstone, M. P. Resolved—"That in order to enable the Western Fair Board to hold a suitable exhibition for a city like London, better accommodation and an increase of the prize list be granted in the swine department. We heartily commend the action of the Western Fair Board in asking a bonus from the City of London to enable them to carry out this work." An interesting paper was then read by Capt. Young, of Tupperville, entitled "Comments on the 1894 Report." After which the meeting was adjourned until Jan. 7th, for winding up the business of the year.



JERSEYS FOR SALE.—Young Cows and Heifers in calf, Heifer Calves and Bull Calves, richly bred, best testing strains, and good color. Also first-class Berkshire Boars and Sows, bred straight from imported stock. Come and see or write for prices.

J. C. SNELL, - Snelgrove P.O., Ont. R. R. Station, Brampton, G. T. R., and C. P. R. 8-y-om

GLEN ROUGE JERSEYS

WILLIAM ROLPH, Markham, Ont., offers Twelve Jersey Bulls and Heifers (pure St. Lamberts), out of tested cows. Grand individuals. Prices right. 21-y-om

THORNCLIFFE STOCK FARM I



Montrose, The Ruler, Carruchan Stamp, Knight Errant and other celebrities. My stock in the above lines were very successful at all the large shows last year. Call and examine our stock before purchasing elsewhere. Terms reasonable. 181-y-om

I have on hand the best young GYMNASTIC Horses and Mares on this continent. Bred from the well-known sires, Prince of Wales, Darnley, Macgregor, Energy, Lord.

SHROPSHIRE.

Orders can now be booked for Shearing Rams, Ram Lambs and Ewes, sired by the celebrated prize-winning English ram, Bar None. Also Rams and Ewes of this year's importation.



SHORTHORNS I

CHOICE YOUNG HEIFERS and BULLS

by the celebrated Cruikshank bulls

NORTHERN LIGHT

—AND—

VICE CONSUL.



ROBERT DAVIES, Proprietor. P. O., Toronto.

ISALEIGH GRANGE STOCK FARM, DANVILLE, QUEBEC.

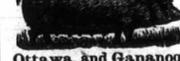


We have now on hand for private sale, choice stock of pure-bred AYRSHIRE and GUERNSEY CATTLE, SHROPSHIRE SHEEP, and IMPROVED YORKSHIRE SWINE. At our recent annual auction sale we disposed of a lot of our surplus stock, consequently we are in better shape to attend to the requirements of our correspondents.

We are preparing for publication a permanent stock catalogue, which, when ready, we shall be pleased to mail to all applicants. CORRESPONDENCE INVITED. 9-y-om

J. N. GREENSHIELDS, Proprietor. T. D. McCALLUM, Manager, Danville, Que.

Mount Vernon Dairy Stock Farm.



FOR SALE:—A fine four-year-old Holstein Bull Artis Aaggie Prince, No. 47, C.H.F.H.B., the sire of many prize-winners at Toronto, Montreal, Ottawa, and Gananoque, in 1895. Sire, Prairie Aaggie Prince, one of the best bulls ever imported to Canada; \$800.00 was refused for him. Dam, Artis Kattie, gave 49 lbs. 2 oz. of milk in one day as a two-year-old, and gave over 70 lbs. milk in one day on ordinary feed on the Model Farm, Guelph. Also a lot of fine Tamworth Pigs for sale, ready to breed and of the very best quality. Address—W. C. QUICKFALL, GLENALLAN, ONT. 2-2-y-o

MAPLE GROVE Ayrshire Stock Farm.



R. G. STEACY, IMPORTER AND BREEDER, LYN, ONT.

Largest importer in United States and Canada of the most noted milk, butter and Prize Record Ayrshires procurable in Scotland. Head of herd is Carlyle Lessnessock, whose granddam was never defeated in a milking contest in England and Scotland, competing against all other dairy herds for years in succession, and awarded more prizes in gold medals, cups and money than any Ayrshire ever exhibited. With the imported females of noted individual records, I am in a position to offer seeing my stock at all leading exhibitions this fall. Registered Rough-coated Scotch Collies from imported stock for sale. 16 2-y-o

There is No Doubt About the MERIT of THE KEYSTONE DEHORNING KNIFE. It cuts both ways, does not crush. One clip and the horns are off close. Write for circular. C. C. SROSIUS, Cochrantville, Pa.

Aren't You TIRED

trying to meet falling prices by rising earlier and working harder? You might as well stop,—it's not to be done that way. Get tools that do a week's work in a day, and raise three bushels in place of one. The PLANET JR. Farm Tools will do it. One single tool combines a hand drill, plow, cultivator, rake, and a wheel hoe that will beat six men. There are 20 others as good. Send for the PLANET JR. Book, (it's free), and give your mind a day's work. S. L. ALLEN & CO., 1107 Market St., PHILADELPHIA.

JERSEY-CATTLE

Of the heaviest milking strains. One of the largest herds in Canada; bred closely to the great dairy cow at Chicago, also the famous two-year-old. Sires of both were sold from this herd. Also Welsh Blood Ponies for ladies' and children's driving. Stock for sale always on hand. GEO. SMITH & Son, Grimsby, Ontario. 8-y-om

GUERNSEYS

This is the Dairy breed for ordinary farmers. Large, vigorous and hardy, giving plenty of rich milk. Imported Bull Benefit, son of Vice-Pres. Morton's famous butter cow Bienfaitrice 4th, heads the herd. Address: SYDNEY FISHER, Alva Farm, Knowlton, P.O. 17-y-o

75 PER CENT.

OF PRIZES WON AT LEADING FAIRS BY

Ingleside Herefords.

Special offerings for next thirty days. Choice young bulls.

YORKSHIRE and TAMWORTH SWINE.

Fall litters at bargains. H. D. SMITH, Ingleside Farm, Satisfaction guaranteed. COMPTON, QUE. 17-y-om

Ayrshires!

PURE-BRED, of different ages, and both sex. No inferior animals. Write for particulars.

A. McCallum & Son, Spruce Hill Dairy Farm, DANVILLE, QUE. 22-y-o

DOMINION PRIZE HERD OF AYRSHIRES



We have the oldest established, largest and best herd of Ayrshires in Canada. Choice young stock for sale at liberal prices. Satisfaction guaranteed. JAMES DRUMMOND & SONS, Petite Cote, Montreal, P.Q. 8-2-y-o

DANIEL DRUMMOND

BURNSIDE FARM, PETITE COTE, Montreal, Quebec, BREEDER OF AYRSHIRE CATTLE. 16-2-y-om



HAVE NOW 3 Young Ayrshire Bulls, ON HAND 1, 2 and 3 years old, respectively; all prize-winners; the 3-year-old having won 1st at leading exhibitions. Write: 19-y-om MESSRS. ROBERTSON & NESS, Howick, Que.

AYRSHIRES - AND - YORKSHIRES.

The largest herd in the Province of Quebec; selected from deep-milking strains. Also choice Yorkshires. Orders booked for young pigs. W. F. & J. A. STEPHEN, Trout River, Que. 20-y-o

J. YUILL & SONS, MEADOWSIDE FARM, Carleton Place, Ont.

Breeders of high class Ayrshires, choice Berkshires, and Shropshire Sheep. Young stock always for sale, at reasonable prices. Our Ayrshire herd is the largest and oldest in Canada. Write for prices. Parties met at Queen's Hotel, Carleton. 20-y-o

G. & E. WOOD, Locust Lodge, Freeman P. O.,

Breeders of high-class LEICESTER SHEEP AND POLAND-CHINA SWINE. Stock for sale at prices to suit the times. Correspondence solicited. 10 2-y-om

SHROPSHIRE

Our importation of show sheep has arrived in good form. This addition to our splendid lot of home-bred shearing rams and ewes, ram lambs and ewe lambs, enables us to offer such a variety of good animals and at such prices that we can suit any person. Write for particulars, or come and see. JOHN MILLER & SONS, Brougham, 12-2-y-om Ontario.

W.S. Hawkshaw

Glanworth, Ont. IMPORTED SHROPSHIRE EWES and their lambs for sale; singly or by car lots. Glanworth Station. American Mammoth Bronze Turkeys for sale. 14 2-y-o

THE GLEN STOCK FARM

Shropshires We will sell at moderate prices a number of Yearling Rams and Ram Lambs, also a choice lot of yearlings and two-year-old Ewes and Ewe Lambs. Our herd of Ayrshires are in splendid form, and parties in need of young stock of either sex will do well to see what we have to offer before purchasing elsewhere. 7-y-om

WHITESIDE BROS., INNERKIP, ONT.

LARGE IMPROVED YORKSHIRES

A choice lot of young pigs from four weeks to six months old, including boars fit for service and sows ready to mate. Prices to suit times. Satisfaction guaranteed. Apply to WM. COODGER & SON, Box 160, Woodstock, Ont. 11-y-o



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I am n pared to young pig noted bred times price booked for pigs due Write me "Advoca 18-2-y-o

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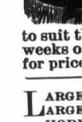
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A choice of young for sale; ages old and tried. Only first shipped. Prices to ited. SHO JNO

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Breed and C Swine, young sex, a prices 8-2-yo

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ISRAEL

Large

Specialty of Improved Large Yorkshires



I have now on hand a choice lot of young boars fit for immediate use. Prices very moderate. Orders for spring will receive careful attention. Pigs of the most desirable type and at reasonable prices.

3-y-om J. E. BRETHOUR, Burford, Ont.

IMPROVED LARGE YORKSHIRES

FOR SALE—of the best type and breeding. Young boars fit for service and sows fit to breed. Can furnish young pigs of all sizes and ages, and No. 1 quality. Can supply pairs not akin.

18-2-y-o H. DOOL, Hartington, Ont.

IMP. LARGE WHITE YORKSHIRES FOR SALE

I am now prepared to supply young pigs of this noted breed at hard times prices. Orders booked for young pigs due Oct. 1st. Write me for prices and particulars. Mention "Advocate."



18-2-y-o WM. TEASDALE, Dollar.

MARYSVILLE STOCK FARM

R. G. MARTIN, Marysville, Ont., breeder of choice Yorkshire and Berkshire swine, Leicester and Shropshire sheep. Young stock of the above always for sale, of the best quality and breeding. All stock guaranteed to be as represented. Write for prices and particulars.

18-2-f-o

The MARKHAM HERD

OF IMPROVED Large White Yorkshires. A choice assortment of young stock now for sale; all sizes and ages; either sex. Pairs and trios not akin. Only first-class stock shipped to order. Prices to suit the times. Correspondence solicited. Shipping G.T.R. and C.P.R.



18-2-y-o JNO. PIKE & SONS, Locust Hill, Ont.

MODEL BERKSHIRE HERD

D. A. GRAHAM, Parkhill, Ont., Importer and breeder of Berkshire Pigs, offers for sale some choice brood sows of all ages; also a few grand young boars for service, at prices to suit the times, and young pigs four to eight weeks old, and choice Bronze Turkeys. Write for prices.

21-L-om

LARGE ENGLISH BERKSHIRES, IMPROVED LARGE WHITE YORKSHIRE SWINE, SHORTHORN CATTLE, AND SHROPSHIRE SHEEP.

A choice lot of Boars of either breed, fit for service, for sale. Young sows in pig, and a lot of very fine Boars and Sows three months old. Herd won 65 firsts and 45 second prizes at leading fairs, 1895. Inspection invited. Address, H. J. DAVIS, Woodstock, Ont.

8-y-om

Large English Berkshires for Sale

A number of very fine young Berkshire Boars fit for service; young sows fit to breed, and younger ones of all ages, either sex, of choicest breeding. All stock guaranteed to be as represented. Write me for prices, or come and see my stock.

18-2-y-o W. J. SHIBLEY, HARROWSMITH, ONT.

H. CREGG & SONS, SALFORD, ONT.

Breeders of Berkshires and Chester White Swine. We have for sale young stock of either sex, and any age, at prices to suit the times. Correspondence solicited.

Maple Cliff Stock and Dairy Farm.

Ayrshire Cattle, Berkshire and Tamworth Swine. FOR SALE—Two young bulls of choice breeding, two young Berkshire sows in pig; also a number of young Berkshires and Tamworths, two and three months old; all No. 1 stock. Write for prices.

R. REID & CO., - Hintonburg, Ont. One mile from Ottawa. 20-2-y-o

ISRAEL CRESSMAN, New Dundee, -IMPORTER OF-

Large - English - Berkshires 4-y-om

Siprell & Carroll, CARHOLME P.O., Ont.

Breeders of Berkshire Swine & Leicester Sheep. We are fully ready for the season of '96 with a choice lot of weanlings of excellent quality. More sows to farrow in January. We solicit a call from all intending purchasers. Correspondence solicited.

12-2-y-o

Large English Berkshires I

Our Berkshires made a clean sweep of all the first (11) prizes offered for Berkshires at the late Toronto Industrial Exhibition, including 1st and 2nd prizes for herd of boar and two sows, boar and four of his get, and sow and four of her produce. We now have a fine lot of young pigs for sale from two to three months, also boars and sows about five months old. Write for prices. J. G. SNELL & BRO., Snelgrove, Ont. Brampton and Snelgrove Sts. 2-y-om

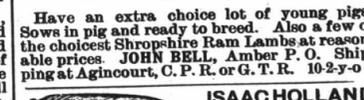
BOARS FOR SALE.

We have a grand lot of Berkshire and Yorkshire boars fit for service, which we will dispose of cheap, as we are overstocked.

12-2-y-o W. R. BOWMAN, Mount Forest, Ont.

TAMWORTHS & SHROPSHIRE

Have an extra choice lot of young pigs. Sows in pig and ready to breed. Also a few of the choicest Shropshire Ram Lambs at reasonable prices. JOHN BELL, Amber P. O. Shipping at Agincourt, C. P. R. or G. T. R. 10-2-y-o



ISAAC HOLLAND SPRUCE GROVE FARM, CULLODEN P. O.

I now offer for sale my four-year-old Guernsey Bull, winner of 1st and silver medal, 1895, at Toronto; 1st and diploma, London, 1895; 1st and diploma, Ottawa, 1895; 1st at Gananoque, 1895. A fine Ayshire Bull, rising one year old, registered. Also some handsome Tamworths, bred from imported stock. Prices reasonable. Correspondence solicited.

8-2-y-o

OHIO IMPROVED CHESTER WHITES.

My herd are imported or bred from imported stock, and have been winners at the leading shows for years. Pigs of all ages (both sexes) for sale. Pairs supplied not akin. Correspondence solicited. Inspection invited.

D. DeCOURCEY, 4-2-y-om Bornholm.

IMP. CHESTER WHITE and TAMWORTH SWINE.

Having won the sweepstakes for the best boar and two sows of any age at Industrial Exhibition (Toronto) 1895, we offer for sale 40 choice boars and sows from four to six months old. Prices away down for next 60 days. Pedigrees furnished. Reduced rates by express. Drop a card for prices. H. GEORGE & SONS, Cramp-ton, Ont., Middlesex County. 7-y-om



When you want to buy a first-class Tamworth or Chester White sow, bred to first-prize sires, or a nice C. W. pig, from 2 to 4 months old, why not buy from a herd which has won 50% of the first prizes and 75% of the sweepstakes at leading exhibitions for the past two years? Come and see our stock at Guelph, Dec. 10, 11 and 12. WM. BUTLER & SON, Dereham Centre, Ont. 7-y-om

CHESTER WHITES AND BERKSHIRES

Young pigs now ready for shipping, and young sows in pig to imported boars. All are held at reasonable figures. Can supply pigs at all ages. Orders by mail filled with care, and correspondence cheerfully answered. Write for prices, stating what is wanted. 18-om J. H. SHAW, Simcoe, Ont.

DUROC-JERSEY SWINE

We have the best and greatest prize-winning herd in Canada. Write for what you want. We have everything. TAPE BROS., Ridgetown, Ont. 18-2-y-om

THE ISLINGTON HERD OF ESSEX SWINE

I am now prepared to supply choice young stock, any age and either sex, of this class. This breed produces pork of the first quality. I am of a quiet disposition and easy feeders. I am also breeding pure-bred Foxterriers. Correspondence solicited. Selling at farmers' prices.

A. B. COOPER, ISLINGTON P. O., Ont. 18-2-y-o

IMPROVED SUFFOLK SWINE, THOROUGH-BRED HORSES, DURHAM CATTLE AND SOUTHDOWN SHEEP.

A grand lot of Suffolk Pigs, all ages, for sale at prices to suit the times. A. FRANK & SONS, The Grange, four miles from Cheltenham Sta., C. P. R. & G. T. R. 2-2-y-om

CANADA: WILKES

Over 100 head — all ages, sexes and different families. Six gilts and ten tried sows, all bred and safe in pig for April and May litters, from \$15 to \$25 each. If you want a bargain, write CAPT. A. W. YOUNG, Tupperville, Ont. 17-y-om

R. WILLIS, JR., - Glenmeyer P. O., BREEDER AND IMPORTER OF CHOICE Poland-China Swine.

Young stock of the best quality always on hand. A couple of young sows bred, and also some young boars fit for service to dispose of at right prices. Correspondence solicited. Mention Advocate. 12-2-y-o

OXFORD HERD OF POLAND-CHINAS

Our herd made a clean sweep of all the first prizes (30) at the late Toronto, Montreal and Ottawa Exhibitions. DARKNESS QUALITY, the unbeaten winner at the World's Fair, heads the herd. Stock for sale. Write for prices. W. H. JONES, Mount Elgin, Ont. 15-y-om

MYERS' ROYAL HOG POWDERS FOR CHOLERA & ALL OTHER DISEASES. MYERS & CO., Niagara Falls, Ont. 4-y-om

M. BRONZE TURKEYS FOR SALE.

For the next 30 days, will sell a choice lot of Turkeys at greatly reduced prices. For a description of birds and prices write W. H. CREWS, Box 323, Trenton, Ont.

Feathers! We Buy Them! WE BUY ALL KINDS, AND WE PAY CASH. Write for Shipping Instructions. THE ALASKA FEATHER and DOWN COMPANY, Ltd., 10 St. SACRAMENT ST., MONTREAL. Manufacturers of Down Comforters and Down Cushions.

HERE AGAIN! SHOEMAKER'S POULTRY ALMANAC FOR 1896. Fully illustrated with finest engravings of special designs. A veritable Encyclopedia of Chicken Information. Sent post-paid for only 15 cents. Address: C. C. SHOEMAKER, Box 65, Freeport, Ill. U. S. A. P. S.—Incubators and Brooders. Hot water, pipe system, the best in the world, a fine 32 page Catalogue free.

MATCH CHICKENS BY STEAM—With the MODEL Excelsior Incubator. Simple, Perfect, Self-Regulating. Thousands in successful operation. Guaranteed to hatch a larger percentage of fertile eggs at less cost than any other Hatcher. Lowest priced first-class Hatcher made. GEO. H. STAHL, 114 to 122 S. 6th St., Quincy, Ill.

NOXALL INCUBATOR. Are used in every State in the Union. Incubator and Brooder self-regulating. Catalogue free. GEO. W. MURPHY & CO., Quincy, Ill.

Incubators & Brooders. Best in the world, hot water, pipe system. Will hatch chicks when others fail. Catalogue Free. Shoemaker Incubator Co., Freeport, Ill. U. S. A.

\$5 Hand Bone, Shell, and Corn Mills for Poultrymen. Daisy Bone Cutter. Power Mills. Circular and testimonials free. WILSON BROS., Easton, Pa.

STOCK GOSSIP.

A. J. Watson, Castlederg, reports: "My Shorthorns came into their winter quarters in splendid condition, considering the dry pasture. Our calves and yearlings are coming along nicely. I have lately strengthened my herd by purchasing the heifer calf, Fashion Fair, from Mr. Arthur Johnston, Greenwood, Ont. She is a beautiful red, got by Indian Chief (Imp.) = 11108 = (57485), dam Fashion 7th = 6091 = by Lancaster = 752 =.

At the annual meeting of the Illinois Sheep Breeders' Association, held at Springfield, Jan. 7, the report of the Secretary, John G. Springer, Springfield, indicated that the Association is doing what it can for the advancement of the interests it represents, but that it is limited in its work because those interested in this industry do not take sufficient thought as to the work the Association can do for the sheep men in the State. The following officers were elected for the ensuing year: President, R. M. Bell, Decatur; Vice-President, R. J. Stone, Stoneington; Secretary and Treasurer, John G. Springer, Springfield. Executive Committee—John S. Campbell, Clayton; G. M. McMillan, Canton; J. D. McMurray, Curran; John S. Lyman, Farmingdale. Papers were read by Hon. E. B. Garland, Chicago; Mr. F. D. Nunes, Chatham, and Hon. E. B. David, a member of the State Board of Agriculture.

H. E. Williams, "Sunnyside Farm," Knowlton, P. Q.—Since writing you last, I have purchased an addition to my hillside pasture, which now gives me a compact farm of three hundred acres. I have also much pleasure in reporting the following sales from my herd of Jerseys: First, to S. L. Spafford, of Lennoxville, P. Q., a young cow, "Lady Blanche," five years old, a most persistent milker, having been dry but two months in three years. I am just in receipt of a letter from Mr. Spafford, saying he is very much pleased with his purchase. Second, to Mr. W. Fanchon, of Beech Ridge, Argenteuil Co., "Bachelor of Knowlton," a yearling bull, first prize winner at Brome County Fair, and a very promising individual, solid dark fawn with black points; a great grandson of Canada John Bull 3rd, dam Lady Green of Bellevue. Third, to A. H. Masson, of Terrebonne, son of the Hon. Mr. Masson, a beautiful bull calf about nine months old. "Victor Hugo of Knowlton" won first prize at Brome Co. Fair; color solid dark fawn; sire Baron Hugo of St. Anne's. The Baron won first prize at London, Ont.; first prize at Ottawa, second prize at Toronto, as a yearling, 1893, and to-day is one of the best Victor Hugo bulls in Canada; he is giving me some exceedingly fine calves. Also to Mr. Masson a choice heifer, "Lady Woodburn of Knowlton," also a first prize winner, sire Wynne's John Bull, dam Lady Harold of Bellevue, sire being a descendant of Jack Frost of St. Lambert, dam great granddaughter of Canada John Bull 3rd. And have just shipped to W. H. Miller, of Hinton, Que. Co., New Brunswick, a very promising bull calf of about nine months, "Baron Hugh of Knowlton," solid dark fawn, sire Baron Hugo of St. Anne's, dam Lady Harold of Bellevue. This also was a very large, well-bred bull, and a grand individual, and should certainly be a valuable acquisition to the dairy interest of that Province. In making sales in different sections of Canada several hundred miles apart, it speaks volumes for the circulation of the FARMER'S ADVOCATE that these sales were made from a short advertisement in your journal—sales which introduce my stock in different parts of the Dominion, not only helping me in these times of depression, but I trust, benefiting those who have been kind enough to give me their patronage. You may always count me a supporter of your valuable journal.

ANNUAL MEETING OF HOLSTEIN-FRIESIAN ASSOCIATION. Geo. W. Clemons, Secretary, writes:—"The thirteenth annual meeting of the Holstein-Friesian Association of Canada will be held at the Albion Hotel, Toronto, on Tuesday, Feb. 4th, 1896, at two o'clock p.m. The Executive Committee will meet at one o'clock. Notice is given that a motion will be made to reduce the registry fee for animals over one year old. A motion will also be made to authorize the appointment of a small committee with power to transact special business without calling a meeting of the whole Executive Committee. The annual member's fee of one dollar is due February 1st. All those in arrears will please settle accounts at once, before the books of the Association are closed for the year."

Dominion Shorthorn Breeders' Association. Mr. Henry Wade, Secretary, Toronto, writes us:—"At a meeting of the Executive Committee of this Association, held on the 5th of December last, the financial position was fully considered, and it was thought desirable, owing to the continued prosperity of the Association, to alleviate the cost of registration for the future; so a resolution was passed lowering the annual membership fee to three dollars, commencing on the first of January, 1896, instead of four dollars as heretofore. Also, to lower the penalty fees for animals over eighteen months of age, to members fifty cents, and to non-members fifty cents, so that after that date members will be charged one dollar, and non-members one dollar and seventy-five cents, instead of the present rates. The rates for animals under five cents to members, and one dollar and seventy-five cents to non-members. The Committee hope that this reduction in rates will bring in many new members, as a volume of the Herd Book is still given for every payment of annual fees made by members. Blank forms and transfers will be sent free on application to the Secretary. Entries for Volume XIII, will commence on the first of January, 1896. Several hundreds of certificates for pedigree records in 1894, and up to March 4th, 1895, have not as yet been returned to this office to be copied. We again ask breeders who have not returned them, to do so, and, although too late for Volume XI, will be published in Volume XII. The membership fees are due January 1st, 1896. The annual meeting will take place early in February, for which timely notice will be given. Wishing you all a prosperous and happy New Year."

Sheep Breeders' Convention.

The Dominion Sheep Breeders' Association, which met in Guelph on Dec. 10, with President John Jackson in the chair, was attended by a large number of representative sheep breeders. At the close of the President's annual address, which was published in Jan. 1st issue, the Committee on Railways, on being asked to report, said that they had heard no grievances expressed during the year, and therefore had nothing to offer. Several breeders then related grievances, which were chiefly against agents; and on motion, Messrs. Richard Gibson, J. G. Snell, J. I. Ho'son, and J. G. Hamner were appointed a committee to draft a resolution embodying the complaints, to be forwarded to the railway authorities at Montreal. The committee was also instructed to secure better arrangements with regard to shipping less than carload lots.

The delegates to fair boards almost all reported that they had been well received, and in many instances they had succeeded in getting the sheep arrangements improved and the prize list augmented by the different boards of directors. The Toronto Fair delegates recommended that the wool exhibit be much increased at the coming fairs. Secretary Ho'son, in compliance with a wish of Manager Hill, brought up the matter of keeping the sheep at the fair the full two weeks, to which there followed a vigorous protestation from the members; and on motion the following resolution was passed: "That, as the Toronto Industrial Board of Directors propose asking exhibitors of stock to keep their animals on the exhibition grounds during two weeks, we, the members of the Sheep Breeders' Association, express our strong disapproval of the same, and are fully satisfied that it would prove an injury to the interests of the exhibitors, and be detrimental to the health of our flocks."

It was unanimously resolved that we believe it to be in the interest of sheep husbandry that some plan be devised for the improvement of judging sheep at district, county, and township fairs, and that R. Gibson, J. G. Hamner, and Jno. Campbell be a committee to devise plans, and report at the next annual meeting.

It was also resolved that the Association recommend better ventilation for the new sheep pen at Toronto, and better facilities for climbing aloft to where the sheep feed has to be stored.

The London Fair delegates reported that the board was anxious to do all possible in behalf of the sheep exhibitors, so far as their finances would allow. The bad arrangement of last show was referred to, and Messrs. R. H. Harding and R. Gibson were appointed to draft a resolution, which is given in the Swine Breeders' meeting report in this issue.

Delegates to the different fairs were elected as follows: For Toronto, Messrs. Russell and Snell were re-elected; Ottawa, H. Yuill; Montreal, J. Brims; London, R. H. Harding and Alex. Smith; Kingston, Alf. Brown; Peterboro, Rich. Vance; Belleville, J. C. Hanley.

Expert judges nominated: Cotswolds—J. G. Snell, Snelgrove; Wm. Thompson, Uxbridge; Thos. Teasdale, Concord; James Russell, Richmond Hill; James Main, Milton; Heber Rawlings, Ravenswood; V. Ficht, Oriel; Geo. Weeks, Gaa'worth; T. Harry Shore, Gaa'worth; W. G. Laidlaw, Willow Grove; D. McCrae, Guelph; B. H. Frink, Napanee; John Thompson, Uxbridge; Peter McGregor, Mar-mora; W. Rae, Arkell; Wm. Ward, Uxbridge; Arthur Johnston, Greenwood; Jos. Ward, Marsh Hill.

Leicesters.—R. Eastwood, Mimico; R. Hastings, Wingham; Andrew Thompson, Fergus; Jas. K. Campbell, Palmerston; Wm. Tindall, Fergus; J. C. Snell and Jos. Snell, Snelgrove; Henry Allan, Newcastle; John Gibson, Denfield; Wm. Cowan, Galt; Clarence Wood, Freeman; Jos. Gaunt and Jas. Gaunt, St. Helen's; J. Morwin, S. Evans, Gourock; John Laidlaw, Willow Grove; Andrew Whitlaw, Guelph; Wm. Whitlaw, Jr., Guelph; R. G. Garbut, Belleville; R. C. Martin, Marysburg; Alex. Smith, Maple Lodge; A. Euston, Appleby.

Dorsets.—G. P. Everett, Mount Vernon; John Jackson, Abingdon; Richard Gibson, Delaware; J. C. Snell, Snelgrove; W. H. Beattie, Willow Grove; T. I. Cooper, Coopersburg, Pa., U. S. A.; M. A. Cooper, Washington, Pa.

Southdowns.—John Miller, Markham; R. L. Burgess, Burgessville; Arthur Simenton, Blackheath; Wm. Martin, Binbrook; Thos. Wilkinson, Hamilton; Richard Gibson, Delaware; J. Jackson, Abingdon; T. C. Douglas, Galt.

Oxford Downs.—Geo. Mackerrow, Sussex, Wis.; W. A. Shafer, Middleton, Ohio; Aaron Bordwell, Corfu, N. Y.; G. J. Campbell, Pittsfield, Ohio; Henry Arkell, Feeswater; R. J. Hise, Dutton; R. C. Birdsall, Birdsall; Arch. MacKenzie, Gorwin; S. Evans, Gourock; Jas. Tolten, Walkerton; Peter Arkell, Feeswater; John Cousins, Harriston; John Harcourt, St. Ann's; Frank Shore, Toronto; H. Arkell, Arkell; Wm. Dickinson, Mildmay.

Hampshires.—Jas. Main, Milton; John Jackson, Abingdon; John Kelly, Shakespeare.

Shrop-hires.—Richard Gibson, Delaware; G. P. Everett, Mount Vernon; J. Conworth, Paris; W. H. Beattie, Wilton Grove; A. Brown, Bethel; R. Miller, Brougham; Jas. Hamner, Mount Vernon; Jas. McFarlane, Clinton; Jas. Cooper, Kippen; W. Whitesides, Innerkip; J. Campbell, Woodville; D. G. Hamner, Mount Vernon; Jas. Phin, Hespeler; M. Levering, Lafayette, Ind.; S. H. Todd, Wakeman, Ohio; A. Elliott, Galt; J. Dickon, Milton West.

Lincolns.—Jas. Brooks, Ernest Parkinson, Eramosa; John C. Snell, Snelgrove; John Geary, London.

The following officers for the ensuing year were also elected: President, James Tolton, Walkerton; Vice-President, E. G. Hamner, Mount Vernon; Secretary, F. W. Hodson, Guelph. Directors—Cotswolds, J. C. Snell; Leicesters, Alex. Smith; Southdowns, T. C. Douglas; Shropshires, R. Gibson; Oxfords, Henry Arkell; Hampshires, John Kelly; Lincolns, John Gibson; Dorsets, R. H. Harding; Merinos, Wm. Smith. General Director, J. I. Hobson. Auditors, Geo. E. Day, O. A. C. Andrew Whitlaw, Guelph.

The meeting adjourned, to meet again on Jan. 8 to finish up the business for the year.



W. H. Ward.
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DIPLOMA
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AWARD
Chattahoochie Valley Expo., Columbus, Ga., 1888.

HIGHEST AWARDS
St. Louis Agricultural and Mechanical Asso'n, 1889.

SIX HIGHEST AWARDS
World's Columbian Exposition, Chicago, 1893.

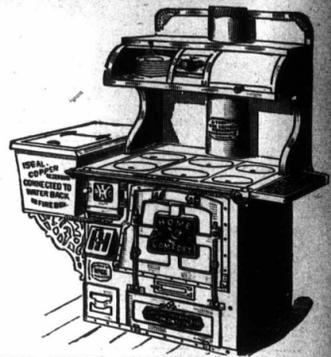
HIGHEST AWARDS
Western Fair Association, London, Can., 1893.

SIX GOLD MEDALS
Midwinter Fair, San Francisco, Cal., 1894.

SILVER MEDAL
Toronto Exposition, Toronto, Canada, 1895.

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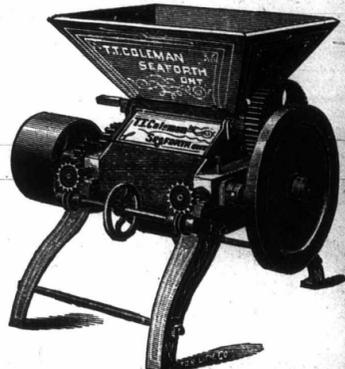
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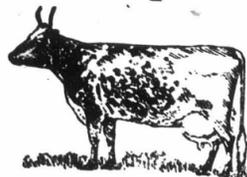
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Hereford Breeders' Association.

The annual meeting of the above Association was held at Guelph, in December, during the Provincial Fat Stock Show, Mr. F. A. Fleming, Toronto, President, in the chair.

The report of the Secretary-Treasurer, Mr. H. Wade, was read. The officers elected in Dec. 1895, were still in force. He had gone on recording Herefords since that time. There were then 2,000 on record; since then 385 were recorded. Unfortunately, all the manuscript was lost when the offices of the Agriculture and Arts Association were burnt on the 3rd of January, 1895. Some of the breeders of Herefords, amongst them the President, Mr. Fleming, have sent in all their private records to help complete the lost records, but there are several certificates outstanding yet that have not been sent in to copy. It is hoped they will be sent in shortly, otherwise they cannot be published.

The list of members was also lost. There were twenty-six paid members at that time, which means \$78 in the treasury as a nucleus for increased work.

Mr. Wade referred to the going out of existence of the Provincial Agriculture and Arts Association, which leaves, he said, an income of \$4,000 a year to the Government in perpetuity. He also reported the results of the joint meeting of Breeders' Association representatives with the Hon. John Dryden, in Toronto last fall, when all the associations there represented, by resolution, promised to fall in with the proposal of the Minister of Agriculture, which was as follows:—"That the Government under the statute have power to appoint a superintendent of registrations, who will have an office in the Parliament Buildings (Toronto), and whose salary will be paid in part directly by the Government, who in that regard take the place of the Agriculture and Arts Association." The business of that meeting was to confer together with the view of arriving at some definite arrangement as to the payment of the salaries of the superintendent's salary, and as to the necessary expenditure in connection with the work of registration. The delegates were requested to meet again some time before the first of January, 1896, to fix the remuneration of the superintendent. This has, as yet, not been done, but can be at this meeting. Arrangements have been concluded with the different Home Associations and with the Shorthorn Breeders' Association. Mr. Wade's proposal to the representatives was to do the recording for 35 cents per pedigree and 10 cents per transfer, leaving the balance of the fees the property of the Hereford Breeders' Association as a fund towards the publishing of the first volume, and he do the preparing and revising of the copy—the Association to bear the expenses of stationery and postage. The present membership fee is \$3, and another assessment of \$3 when occasion requires. The present fees for recording to members, giving them a certificate, is 75 cents; to non-members, \$1.25.

The President, Mr. F. A. Fleming, informed the meeting that he was not a candidate for the honor of the presidency again, as the office should not be monopolized by any one man.

The following gentlemen were elected officers for 1896:—Mr. H. D. Smith, of Compton, President; Alf. Stone, Guelph, Vice-President; H. A. Muntz, Olds, Alberta, Vice-President for N. W. T.; Sir Donald A. Smith, Vice-President for Manitoba. Directors—Gen. Brant, Warwick; A. Waldon, Acton West; Richard Stutt, Forest; Jas. Carewell, Renfrew; F. A. Fleming, Weston; A. Rawlings, Forest; W. W. Black, Amherst, N. S.; H. Reed, Mimosa, and D. W. Green, Toronto. Henry Wade, Toronto, Secretary-Treasurer.

On motion of Mr. Stone, seconded by Mr. Rawlings, a vote of thanks was tendered to the retiring President, Mr. Fleming, and was appropriately acknowledged.

Moved by Mr. Stone, seconded by Mr. Waldie, "That the delegates, Messrs. Fleming and Rawlings, be authorized to sign the agreement with the Superintendent of Live Stock, that an occasional assessment of \$2 be made as occasion requires.

It was also resolved that for the future the annual members' fee be reduced to \$2—a call to be made for the first of January, 1896, and that an occasional assessment of \$2 be made as occasion requires.

Moved by F. A. Fleming, seconded by A. Rawlings, "That the Canadian Hereford Breeders' Association add 25 per cent. to any of the prizes in class 6 (grade) and crosses at the next Ontario Provincial Fat Stock Show (1896), if such prizes should be taken by Hereford grade and crosses; and also that if the championship prize of the Show (class 7) should be won by a Hereford or grade Hereford, that \$25 be added to the prize." Carried.

It was resolved that the Industrial Exhibition Association be asked to allow a representative on their committee, and that Mr. F. A. Fleming be said delegate.

Mr. D. W. Green then read a very able paper on Hereford subjects.

Jas. S. Smith, Maple Lodge:—"During the past season we made very good sales of our Leicesters to different parts of Canada and the States, and reduced our flock from over one hundred to sixty. In September we sold and shipped a very fine shearing ram to Mr. M. H. Parlee, Sussex, New Brunswick, which pleased him very much, and which he afterwards showed very successfully at St. John and elsewhere. With reference to this ram Mr. Parlee afterwards wrote us as follows:—"I was quite successful at St. John show with the shearing ram purchased from you. He won first easily, and was by far the finest ram on the grounds. There was strong competition; exhibitors were there from Prince Edward Island, the crack place for sheep down here. Most of them showed stock purchased in Ontario, or those bred from such stock; but the shearing I got from you was the center of attraction of all." A New Brunswick journal referring to this same ram, says: "The shearing Leicester ram shown by Mr. Parlee was one of the finest specimens ever shown in the Maritime Provinces." We have retained a few ram lambs which we expect will next fall be such shearings as will suit the most fastidious. Our young Shorthorn bulls are doing splendidly."

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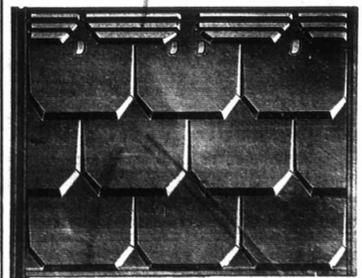
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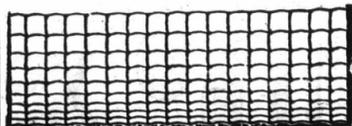
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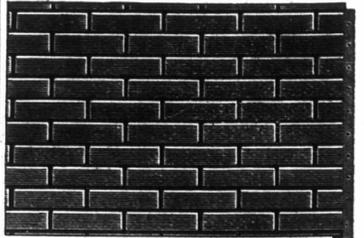
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