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THE FARMER'S ADVOCATE & HOME MAGAZINE

WILLIAM WELD, EDITOR AND PROPRIETOR

THE LEADING AGRICULTURAL JOURNAL PUBLISHED IN THE DOMINION.

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

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Our Monthly Prize Essays.

CONDITIONS OF COMPETITION.

- 1.—No award will be made unless one essay at least comes up to the standard for publication.
- 2.—The essays will be judged by the ideas, arguments, conciseness and conformity with the subject, and not by the grammar, punctuation or spelling, our object being to encourage farmers who have enjoyed few educational advantages.
- 3.—Should one or more essays, in addition to the one receiving the first prize, present a different view of the question, a second prize will be awarded, but the payment will be in agricultural books. First prize essayists may choose books or money, or part of both. Selections of books from our advertised list must be sent in not later than the 15th of the month in which the essays appear. Second prize essayists may order books for any amount not exceeding \$3.00, but no balance will be remitted in cash. When first prize essayists mention nothing about books, we will remit the money.

A prize of \$5 has been awarded to J. W. Bartlett for the best original essay on *The most Economical and Profitable Management of Fowl*.

A prize of \$5 will be given for the best original essay: *Showing the Benefit Which has been Derived from the Various Specific Associations, Such as The Dairymen's, Horticultural, The Poultry Keepers', etc., etc. How Can These be Made Most Beneficial in the Future? Are Other Societies Needed?* Essays to be handed in not later than Nov. 15th.

A prize of \$5 will be given for the best essay on *The most Economical and Healthful System of Feeding Farm Horses, including Working Animals, Brood Mares and Growing Colts*. All essays must be handed in not later than the 15th of December.

Active agents wanted in every locality, to obtain new subscribers to the FARMER'S ADVOCATE. Send for sample copies, and commence canvassing at once.

Editorial.

Our Subscription Prizes.

A great many of our small prizes have been awarded; still we can go on duplicating them. Our stock and poultry prizes, as well as our implements, are giving first-rate satisfaction. We did not for a moment suppose it could be otherwise, as all our stock prizes were obtained from reliable and experienced breeders, with the distinct understanding that the stock was to be first-rate both in quality and breeding. Our own long experience in breeding, and intimate intercourse with the breeders of all classes of pure-bred stock, enabled us to make most judicious selections. The first prize awarded was a light Brahma cock to Arthur F. Misener, of Troy, who writes us as follows:—"I received the bird in good condition, and am well pleased with him." The next prize was a Shropshire ram lamb, bred by Mr. John Dryden, M. P. P., and won by Robt. Gammell, Upper Stewiacke, N. S., who writes us:—"I received the ram in good condition; he is a model Shropshire; * * * he has been awarded a special prize at the Truro Exhibition. When canvassing I met a man who wanted a Clydesdale stud colt. He saw Mr. Rennie's advertisement in the ADVOCATE, and asked if I knew any other reliable breeder. Whom can you recommend?" We would refer this gentleman, as well as all others, to our advertising columns.

Mr. Rennie has good Clydesdales, so has Mr. Arthur Johnston, Greenwood, Ont.; Mr. David Birrell, of the same place; Messrs. Jeffrey Bros., Whitby, Ont.; Messrs. Graham Bros., Claremont; John Miller, Brougham, Ont., and others. By reading the ADVOCATE carefully you will soon find the best, either in this or other lines. Just as we go to press we have received from Messrs. John Miller & Sons two Shropshire lambs, which we have just awarded to a leading breeder in Western Ontario. They are a nice pair, and will do good where they have gone. Mr. Miller writes us as follows concerning them:—"We have shipped you the two lambs; they are good, and fit to head any flock. They are eligible to be recorded. Their pedigrees will be forwarded at once." Those who have not read our prize list, should do so. As long as the advertisements of any breeder remain, we will duplicate the prizes, if already awarded. In all prizes sent out we will guarantee satisfaction to the receiver. Our supplementary prizes will also be good. The bulls which we offer are extra value, and given cheaper than they could be bought from their breeders. We would also direct the attention of our readers to our Berkshire and implement prizes, which we are sure will give splendid satisfaction.

Those wishing to canvass or obtain prizes should write us for full particulars. Every possible advantage will be given to those who wish to obtain these prizes. All articles calling for 30 to 50 new names may be divided thus:—30 new names for one year, or 15 new names prepaid for two years, and any number up to 50 may be thus divided; above 50 to 100 may be divided by three, thus, an article calling for 60 new names may be won by the 60 new names prepaid for one year, or 20 new names prepaid for three years. Articles calling for 100 to 200 new names, may be divided by four, thus, 50 new names prepaid for four years, or 100 prepaid for two years, or 200 prepaid for one year. This system may be carried out with prizes requiring names between 100 to 200. This plan will be found of great value in the newer sections of the country. Sample copies and all necessary outfit will be furnished on application to all who desire to canvass. We have offered these prizes with the especial object in view of benefiting the farmers, by making it easy to obtain first-class stock for breeding purposes, and at the same time giving every subscriber to the ADVOCATE splendid value for his dollar. No other paper in the Dominion gives as good value for twice the money. During the winter and spring months we intend to introduce among our subscribers several new and promising kinds of grain, vegetable and flower seeds, full particulars of which will be given later.

The Price of Apples.

In some parts of Canada prime winter apples have been purchased at 75 cents per barrel. Perhaps the average price may have been \$1. The fruit growers in New York State have become so exasperated at the tricks and devices of middlemen, that a large meeting has been held, and plans are being arranged by which they hope, by uniting and erecting proper store-houses, to realize one-half more for their apples than they are now receiving. Those that have suitable storage will, we believe, realize much higher figures than the present rates. Canadian apple growers should organize for their protection. The Canadian cheese market has been so manipulated this year by the bulls and bears, that factorymen are devising plans whereby the patrons and cheesemakers may not be so much injured in the future as they have been this year. We shall be pleased to report progress in their undertakings.

The friends of the ADVOCATE can always find much useful and important matter in each issue; to which they can call the attention of those who should subscribe for it.

If some of the leading farmers in your section do not get the FARMER'S ADVOCATE, induce them at once to take it for one year, and they will never be without it.

On the Wing.**PINKERTON EXHIBITION.**

Pinkerton is a small village in the county of Bruce, situated about two miles from the railroad station of that name. The directors consist of five men; they have erected their buildings, had the grounds enclosed, and charge a small admission fee to enable them to pay their prizes and other expenses. Here the display of Shorthorns and Shorthorn grades were the only cattle exhibited. The quality was highly commendable, as also was the exhibit of horses, etc.; local manufacturers exhibited some implements that would have done credit to larger exhibitions, and probably increased the profits of the manufacturers. But what surprised us most in this township exhibition, which is the most northern exhibit we have seen in Ontario, was the very fine display of fruit. The apples in this section are of a very fine growth, more exempt from spots and worms than many of our more southern counties. The trees in this locality are young and are bearing as good crops of as fine apples as can be found in any part of the world. Dr. J. D. Douglass, the Secretary, exhibited some remarkably fine pears, and also an almost white tomato, which to us was a novelty. These he has grown for some years.

In the evening a very pleasing, amusing and instructive entertainment was given, consisting of music, recitations, songs and speeches. The Chairman announced the object of the association in getting up this meeting being to aid their agricultural exhibition.

D. E. Cameron, Esq., Deputy Provincial Treasurer, was the first speaker called on. He stated that our Dominion was of larger area than that of many European nations, and larger than that of the United States; that we possessed the two most extensive railways in the world; that we had a larger extent of tillable land than the United States, and that we should look forward to establishing our own nationality; we should have our own history; by independence we might become a strong support to England, that as we now are we are a source of weakness. He hoped in a few years to see the Canadian flag on the Citadel, where the British flag now floats.

Your humble servant was next called on. Not having prepared an address, and being a Briton by birth, knowing the oppressions and poverty that exist in Great Britain, and continued changes and eruptions in France and Europe, noticed the dangers existing in the United States, believing that, despite all the defects and tardiness of the British nation, there is greater stability, more honor and more justice in her government, and greater freedom given to her subjects, than in either the United States or in France. Although on the most friendly terms with our American cousins, we could not forbear expressing our opinion, although antagonistic to Mr. Cameron. We advocated the maintenance of the British flag and British connection, believing that independence would shortly result in our subjection either to the French or United States supremacy. We depicted some of the disadvantages, losses and deaths that had been occasioned by the overbooming of advantages of some localities in the United States, and hoped to see the child united with its mother, believing from what we had seen and heard when in the United States, that our Queen was held in greater respect in that country than any individual in

it, that the administration of our laws was held in higher estimation there than their own administration, and that greater liberty and justice to individuals was secured under the British Government than under their own.

Mr. W. M. Dake, M.P.P., of Huron, supported the views of Mr. Cameron, and commended the work of the officers of township exhibitions. He believed the Provincial Association had outlived its usefulness, and thought further assistance should be given to township and riding exhibitions. The township exhibitions are growing, and many are now as good as the riding exhibitions; that they enhance the value of products and land in the vicinities in which they are held, and farmers should contribute to their support whether they exhibit or not. He considered the Agricultural College had done good, and said that the Dominion Government had now established five Experimental Stations.

Mr. H. Cagill, M.P., of Bruce, said Mr. A. McNeil, M.P., was unavoidably absent, and who was to have given his views on Imperial federation. The Agricultural College and the Experimental Stations may be of benefit, but we have to pay dearly for the whistle. He believed the farmers would learn as much by reading the agricultural papers at home as by attending the experimental colleges. He had seen those that had been guided by the scientific instructions of colleges, they could talk a great deal, spend a lot of money and fail, while the real practical farmer would succeed. He believed more in practice than in theory.

Mr. Gibson, M.P., of Huron, thought it best to leave politics to election campaigns. He sang some appreciative auld Scotch songs, which brought down the house, particularly so when he called for a drink. He said he had not taken as much as a half cupful of whisky during his life, at the same time he did not approve of the Scott Act, and thought the people should be left to act as they pleased. He was not prepared to say that the usefulness of the Provincial Exhibition was gone, and considered the prizes given by it enhanced the value of our stock in foreign markets. He had visited the Industrial Exhibition in Toronto; the crowd was larger than at the Provincial, but the agricultural exhibit was no better, in fact he found the crowd a hindrance, as when he was examining a threshing machine, the exhibitor and everybody else rushed out at the cry the balloon was up. He confessed he might be a sinner because he had made up his mind not to see it, but he went with the crowd, and was surprised to see the man alight on the ground as easily as a pigeon after his great ascent. He did not see much harm in that, but he was thoroughly disgusted by having been detained by the storming of Sebastopol, and had waited for three and a-half hours on the ground, cold and uncomfortable, to see a few sky rockets fired, then some powder flashing for about ten minutes, and all was over. He had lived at the time of the battle, was interested in it, but this was not a bit like it. It was a perfect farce, and considered it far more preferable to give Barnum the fifty cents than to waste one's time in going to such things in Toronto; in fact, he had this day seen more of an agricultural exhibition than when in Toronto. He said what good did this do. He thought it questionable whether more injury than good was not being done by the Industrial; he also thought that either the riding or the township exhibitions might be abolished.

The Chairman thought we were safe as we were; politically we were in no way embarrassed by our British connection; said the farmers approved of township exhibitions, and thought the Government grant might be used to stimulate them.

Capabilities of the Northwest.

Alexander McDonald, special commissioner sent out recently to the Canadian Northwest by the Mark Lane Express, has passed very high encomiums on the capabilities of that country, and recommends it as a very desirable place for British farmers to emigrate to, as it possesses, in his opinion, vast plains of almost inexhaustible fertility. From Winnipeg to the Rocky Mountains, a distance of 900 miles, the best known lands in the world are found, and he estimates that this area contains from two to three million square miles, the capabilities of which, as a cereal producing country, cannot be over-estimated. Had it not been for the frost that visited that country this year, the surplus of wheat would have been fully 20,000,000 bushels, but taking the decrease into account, caused through the agency of frost, the Northwest will export larger quantities of grain this year than any previous season. The farmers there display too much laxity in their operations, which has a tendency to create a feeling of inertness—a state of mind dangerous to the individual's best interest and the agricultural progress and prosperity of any country. Mr. McDonald reports that he saw beautiful fields of oats that had been sown on stubble land, and the only cultivation the ground had been subjected to was a very meagre harrowing after the grain had been scattered among the stubble, thus proving beyond a doubt that the rich, alluvial soil of the Northwest is not surpassed by any other country. The want of attention to the utilization of farm manure was everywhere observable, and the straw, which should have been applied to the soil to resuscitate it, was burned. The yield of wheat this year on an average is from 28 to 40 bushels to the acre, and in districts which escaped the frost the return will average fully 40 bushels to the acre. The larger farmers are showing commendable enterprise by introducing good stock, and taking the country as a whole Mr. McDonald has no reticence in saying the stock is superior to that of the Maritime Provinces. To the educated agriculturist farming in the Northwest may appear somewhat crude, but a land so rich in virgin soil will most assuredly develop an intelligent community, and be the birth-place of a manly and vigorous type of the Anglo-Saxon race. The incongruities in farm operations will be rectified in the near future, and the institutions that are now in their infancy will gather strength and stability as the country increases in wealth and influence.

At the opening of the Western Fair, London, the Hon. John Carling, Minister of Agriculture, said the estimates showed that Ontario would have fifteen million bushels more of grain this year than last. Although there was a deficiency of 12 per cent. in the product of wheat there would be an increase of 25 per cent. in the prices realized. Facts have since shown that the hon. gentleman has rather underestimated the price and yield, than exaggerated them. He also stated that although there might not be quite as much first-class wheat in Manitoba and the Northwest, they would receive two million dollars more for it. In regard to retaliation, he said, "I do not think we have done anything to provoke such a measure. The course of Canada having been a free, straightforward and honorable one, we have right on our side, and right will prevail."

How Shall We Feed Our Straw?

Mr. G. H. Grierson, of Oshawa, one of the most progressive farmers of Ontario, and who has evinced on many occasions a deep interest in questions of vital importance to farmers in Canada, has sent the following to us:

"The Sept. number of your paper has come to hand, and we are much pleased with its contents, and I join my son in expressing regret that we had not taken the paper years ago. The articles in the *ADVOCATE* on the subject of ensilage induce me to make a few remarks on the fodder question—on a point to which the attention of many men in this neighborhood has been drawn of late—namely, the proper preparation of straw for use. We believe that straw must always, and largely, form the basis of our winter feed in this country; we believe there is great loss in feeding it whole, most animals merely picking it over and rejecting a large portion of it. If straw is cut, it is objectionable on the well established fact that the short, sharp, unbroken particles affect injuriously the mucous membrane of the mouth and stomach. On these grounds many farmers in this section are anxiously asking the question, Why cannot straw be ground? That is, its fibre completely broken, and made into chaff. We believe that in this state it would make infinitely better feed, go further, and in the end make better manure. What say you, Mr. Editor, to these views? Some inventive genius may present the public with a straw grinder that will make our straw go twenty-five per cent. further, and to that extent increase our ability to keep cattle."

The suggestions offered by Mr. Grierson may be the means of being an incentive to encourage other progressive farmers to give the question their serious consideration, and it may not be premature to remark that, should his suggestions be practically applied, much of the coarser fodder, which at present is difficult to utilize for feeding purposes, can be profitably used. Considerations of profit are serious questions to the farmer, and it is only by pursuing an intelligent system of experiments that he will be able to arrive at an intelligent conclusion on the subject. It is very evident that a larger quantity of digestible food can be prepared for stock more cheaply by utilizing coarse fodder, and that various kinds of straw, if properly prepared, can be more profitably used than depending entirely on concentrated fodders. Animals of a ruminating disposition are by nature so constituted that the nutritive properties of coarse fodder are easily assimilated by their digestive organs. The question of preparing coarse fodders for stock is one of vital importance to the farmer. Straw is frequently regarded as possessing little value for feeding purposes, and the assumption that the fibre is wholly indigestible has deteriorated its value in the mind of many farmers. A distinction must be made between good and bad straw, as all straw affected by rust, mildew, etc., is unfit to be used as fodder. The conditions under which the straw grew, and the kind of straw, must be taken into consideration, as the value of the nutritive properties depend largely on the quality of the soil. It must not, however, be overlooked that in order to produce the best results by feeding straw, it must be fed in conjunction with cereals or their product.

The following figures furnished by Mr. J. E. Read, an eminent agriculturist, will show the relative value of the various straws compared with hay: 100 lbs. of good hay is supposed to be equal to 400 lbs. green clover; do., 275 lbs. green corn; do., 374 lbs. wheat straw; do., 442 lbs. rye straw; do., 195 oat or pea straw; do., 400 lbs. dry corn stalks.

Mr. Grierson claims that cut straw is injurious, as the unbroken particles irritate the mucous membrane of the mouth and stomach. This objectionable feature has been largely overcome by some progressive farmers by preparing the straw in the following order: Two boxes, sufficiently large to hold enough of cut straw for a day's feeding each, are made. A layer of cut straw two feet deep is placed in the box, and is moistened with enough boiling water to make it damp, over which bran is scattered. A second layer of cut straw is added, and the same process of adding hot water and bran is again repeated. Continue this process till the box is full, over which place a tight fitting cover. This mixture is left in the box for 48 hours, by which time the straw has absorbed sufficient humidity to make it palatable and prepare it for the stomach without possessing the objectionable features of which Mr. Grierson writes. In conjunction with the above mixture, meal of some sort should be fed; the quantity of meal should vary according to the animals to which it is given. Animals that are being fattened, cows giving milk and those in calf, should receive more meal than store cattle.

Another way of utilizing cut straw, and which has proved very successful in the experience of Mr. Jos. Ward, of Marsh Hill, is to incorporate the cut straw with pulped turnips. Boxes similar to those described in the former process are used. After the turnips are pulped and the straw cut, they are placed in the box and thoroughly mixed. A tight fitting cover is placed over the box and the mixture allowed to remain 48 hours before feeding it. Mr. Ward fattened 30 head of cattle last winter by adopting this system, and the result was most satisfactory. A little cut hay was mixed with the cut straw, and the desired quantity of meal and bran mixed in when fed.

The Provincial Fair.

BY JOHN DRYDEN, M. P. P.

At intervals during the past eight or ten years considerable discussion has taken place relative to the continuance of the Provincial Exhibition under the auspices of the Agricultural and Arts Association.

My opinion in reference to it is now so well known, that it will do no harm to repeat it here.

The arguments for its continuance may be briefly stated as follows:—First—It has accomplished much good during its past existence; therefore, it should be continued indefinitely in the future. Second—It is an exhibition held especially for the benefit of the farmers, and money given for that object ought not to be withdrawn. Third—It is the only exhibition in the province that is controlled by farmers. Fourth—It is, or ought to be, a purely agricultural show, without any outside attractions.

Regarding the first argument, no one will deny the truthfulness of the statement. But I take decided objection to the inference drawn from this statement of fact. It is not a proper reason to urge that, because good has been accomplished in a certain way, under special circumstances, that when these have changed, it is certain to follow that the same good will be accomplished by their continuance now.

The school which may have answered an admirable purpose fifty years ago, will not suit the necessities of to-day. And it appears to me that the arguments for the continuance of these exhibitions under present circumstances, are no stronger than the argument for the perpetuation of the school of the last century.

Let us inquire, what is the object of these exhibitions? It is, certainly, to gather as large a variety of the best products of the province as possible, in order that they may be compared with each other, and that the uninitiated may be stimulated to a higher endeavor to produce

similar results. The exhibition thus becomes an educational institution.

There was a time when only the Provincial accomplished this, and all that is said about the good then resulting is no doubt perfectly true; but to-day this is being done to a very great extent by almost every county in the land; and, indeed, the only complaint that I would make is that it is now being overdone by existing Associations. The Provincial Exhibition steps in and simply makes one more. There is nothing better about its management, nothing better about its prizes, nothing different about it in any way, except it may be in some respects inferior, as suggested by my friend, Mr. McRae, at Kingston.

It appears to me perfectly plain, that it is impossible for representatives comprising the Board of this Association to gather together in a strange place and manage an exhibition as well as men who are on the ground during the whole year.

Every large city or town of any considerable dimensions has now an annual gathering, altogether independent in many cases of government grants. Many of these are quite as provincial in their character as that held under the auspices of the Agricultural and Arts Association. Compare, for instance, several of those held this year, notably Toronto, Hamilton and London, with that held in Kingston; and I am certain nothing could be advanced showing the one at Kingston to be any better or any more provincial in its character than the others.

Now, if this be true, the farmers are equally benefited by the latter; and there is no advantage in crowding in one more where there is no lack whatever.

Again: It is alleged that this institution is controlled by the farmers. I doubt very much that there are more farmers having a controlling influence on this Board than there are in connection with other similar exhibitions. The county agricultural associations are not always controlled by the farmers; the residents of the town and village have an equal voice, and hence, the representatives chosen may not necessarily belong to this class. Of necessity the Provincial must to some extent be controlled by representatives of the city where it is held. These persons insist on adding attractions which will make it popular in the city. But, to my mind, there is no point in this argument. It does not matter whether a farmer, merchant or doctor manages the exhibition, so long as it is managed for the advancement of the agricultural interests of the Province.

But, it is urged that these competing exhibitions are largely composed of circus performers, horse races, &c. This may be an objection to some. It certainly indicates what is the general taste of the people; and unless this taste can be changed, it is not likely these attractions will cease; but I do not find the Provincial any different in this respect from the others. The principle of outside attractions is acknowledged and acted upon, the only difference being that some of the attractions may be of an inferior character. If all were of my opinion, these outside attractions would count for very little. Many of them, however, can only be considered as harmless amusements; and while it may be urged that they are educating the masses to look and seek for such things, yet there is another view which may be taken of them. It is certain some are

drawn to the exhibition for the reason that there is much to be seen of the character indicated. They probably would not attend, were it not that, to the show proper, there are added these attractions. When they are there, they are likely to desire, as hundreds do, to see also the other parts of the exhibition, and, in viewing it, are frequently stimulated to endeavor to follow the example of others whose products are being exhibited. At all events, they receive the same agricultural education as those who attend for that purpose only. I am not pleading for these attractions, nor do I desire to excuse them. I take no interest in them whatever; but they do draw the multitude there, whose money is afterwards used for the legitimate advancement of agriculture.

If the Provincial is to continue at all, it must take the lead of all others. It should be ahead in extent of prizes, and in details of management. Now, I ask, can this be done? Is it worth while to try?

In my judgment, it is not, at present. The field is already occupied, and no good will result by merely adding another, when there are already too many.

Farmers' Clubs.

Dominion Farmers' Council.

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

On the 18th ult., the Dominion Farmers' Council assembled, President Anderson in the chair.

REPORT OF COMMITTEE SENT TO THE ONTARIO AGRICULTURAL COLLEGE, GUELPH.

After the disposal of the routine business, Mr. Deadman, the member of the committee who was to report on the horticultural department of the College, was called upon to give his report, which read as follows:—

We are sorry we cannot make any satisfactory report of the fruit department of the Agricultural College, from the fact that the Superintendent, Mr. Forsyth, brought with him the wrong book, and could not furnish us with any satisfactory or reliable information as to the names of the different varieties of raspberries, currants and strawberries grown; therefore, we had nothing by which we could determine the kinds which had withstood the winter best, and those which could be recommended for general cultivation. We could only pass through and comment on the general appearance and cultivation. We must say we consider it a total failure, which Mr. Brown attributed to the high situation of that part of the country, where the winters were too severe to grow fruit profitably. We must here differ with him; and we unhesitatingly say that the real cause of failure was the portion of the farm chosen for the planting of the fruit, &c. In the first place, the land is the lowest on the farm, taking the whole of the drainage from the back of the next farm, and in very wet times in spring and fall must be subject to a great overflow of water. We never saw a worse location chosen, without being properly and deeply drained before planting. We do not blame the present authorities for this, as Mr. Forsyth informed us that it was chosen by a deputation of the Fruit Growers' Association, Mr.

W. Saunders and Mr. Beadle being members of that committee. Only imagine a two-foot drain, and, think, only one main drain, being sufficient for the drainage of an orchard; and we were further informed that this drain had been entirely filled up, and a good part of it had been ploughed up. There appears to have been no attempt to remedy this lamentable state of affairs since, but left to die of neglect.

2nd. We believe, in addition to the want of drainage, another chief cause of failure was the borer. We saw two stubs of apple trees left, the trunks having decayed and broken off about two feet from the surface, which cause was attributed to the frost; but we practically proved that the borer was the cause, having found them in the trunk, and where they had operated, eating, girdling and killing the tree. Everyone of any knowledge in fruit culture is aware they thrive more where the trees have been stunted in growth, and in wet localities.

We cannot but believe that were a higher location chosen, and freed from water, that the apple can be as well cultivated here as in any other locality in Western Ontario. We cannot see that a higher elevation can so change the climate as to make it impossible to raise apples, except a few hardy kinds, from the fact that those few remaining of the seven acres planted, and which were on a higher corner of the field, is positive proof that the idea is entirely fallacious; and where the Fall Pippin tree can be grown, any other kind can be grown also. It seems strange to us that this branch of agriculture should be so neglected at the Farm, and that no efforts have been made to re-plant, the Institution with small fruits for their own and not make it only subservient in supplying and to test and disseminate all the newer consumption. The grapes cultivated were a kinds, number of varieties, and in ordinary years only about ten kinds ripened; and, I presume, this year they must have been a total failure, from the cold season. Last year being exceptionally a warm fall, ripened more; but why keep cultivating kinds that have been proved to be unsuitable, and that are too late in maturing? We could not learn anything about the kinds that were successful, and those that were not. The strawberries were a failure, from the fact that they had not been renewed for two or three years, instead of being renewed every year. A greater part of the raspberries had been injured by the winter, and was a mass of young wood in hills, instead of three or four canes being left in each hill for next year's bearing, and all the young wood being cut out as soon as possible. Altogether, we came away with anything but a pleasing recollection of the Fruit Department of the Agricultural College at Guelph.

Mr. Anderson, another member of the committee, in opening the discussion, said that he considered that the Institution was looked upon in a wrong light. The fact that it was one at which experiments were to be conducted, necessitated them to try varieties of fruit, &c., and methods of cultivation, which frequently turned out unprofitable. It was no use in experimenting on already well-established facts; but things which were unknown or uncertain had to be tried, and therefore experiments which showed that certain varieties or methods of cultivation were unprofitable, were not a failure, but a success, as they showed what to avoid. It was beneficial to know that out of the large number of grapes tried, only ten, the names of which will be

given in the report, were of value for that climate.

Prof. Robertson said that in justice to the Fruit Growers' Association he was forced to say that the selection of the orchard by that body had been made in winter, when there was fully two feet of snow, and that at that time the ground presented a much higher appearance than it really had. He had sampled all the varieties of grapes, and had found that none of the white varieties had ripened.

Mr. Kennedy said that Mr. Deadman's report was correct, and after considerable discussion by members of the Council, the report was adopted.

Prof. Robertson then gave a brief outline of the work of the Dairy Department at the Ontario Agricultural College, and continued as follows:—

DAIRY FARMING.

The people of Ontario do not recognize the value of the dairy industry. Seldom does it receive due credit for the service it has rendered to the farming and other interests of the Province. Hence, I may be permitted to occupy the attention of the Council a short time in pointing out some of the unacknowledged benefits that have followed from its development. Dairy farming, notably in connection with the establishment of cheese factories, has saved whole districts from the fate of speedily becoming unproductive. It has also largely increased the productive capacity of exhausted lands, and added to their yearly earning power. Many counties have been made wealthy by the increase in the fertility of semi-exhausted soils. Were this annual return from this extra earning power capitalized at 6 per cent., it would represent over thirty millions of dollars. The direct income of the farms from the sales of cheese last year was, in the aggregate, augmented by nearly nine millions of dollars. Not one bushel the less of wheat or any other grain had been grown in consequence. The circulation of so much money is to be credited to the cheese industry. Then, the dairy business has developed a market for coarser grains and fodders, without the exhaustion of fertility that would be caused by their direct sale and exportation. The straw from an oat crop, for instance, will realize good value through the dairy. Then, through the elaboration of the dairy, provision is made for the use as human food of much of most crops that would be otherwise wasted. Farmers are the food-furnishers for the race. It is their occupation to provide good things to eat and the raw material for clothing. It is a necessity of long-continued farming that the parts of crops which are indigestible, unpalatable or unsuitable as food for man, be fed to animals as preparation for his use; or that they be used as plant food, fuel or clothing. Plants are contrivances in nature whereby and wherein the energy of the sun's rays is stored and held available for man's use. When man cannot use that directly from the plant, or part of it, it should be otherwise prepared for him through its use by animals or other plants. By that means a man could, metaphorically, be said to live on grass, grain, straw, hay or corn, when these were turned into nutrients by the cow. Five times as large a civilized population can be supported by dairying as by any other system of farming, if gardening be excepted. Dairy farming necessitates a larger population, and makes its maintenance easily possible. Population alone gives value to property, and hence, any system of agriculture which provides for the comfortable maintenance

more than all the immigration agents, to advertise the resources of the country, in the most convincingly attractive way. In England, Canada is best known by her exports of cheese, and thus we are advertised in every house where it is consumed. The press of England, through our butter and cheese display at the Colonial and Indian Exhibition, gave us no less than six hundred miles of single column printing and circulation, free of all charge. With reference to Mr. Leitch's statements about the activity of the Australian, New Zealand and Danish Governments in the interests of the farmers, I may be permitted to say that no country has done more to open up markets for its dairy products abroad than Ontario. If Denmark is lately, through its government, sending agents to England to see that the Danish brands are not copied or counterfeited, it is open to question whether private business enterprise will not do more to protect and advance our dairy interests in English markets than the Government can. The prospect of high prices for cheese in years to come is not very bright. Perhaps an average of eight cents per lb. may be all we can expect. At any rate, our farmers should try to produce milk cheap enough to be able to sell at that price at a profit. The reduction of the cost of production will not lessen the price per lb. that may be realized by any dairyman in Ontario, but it will increase the margin of profit. We can produce cheese at as low a cost as any country; and if severe competition comes, we will not be the first forced out of the markets. The cost may be reduced by milking the cows ten months instead of six. The cow eats for twelve months in the year, and she should be kept productive for as many of them as possible. A large proportion of the cows should come in from October till January. By the common method of farming, a cow consumes annually the product of five acres. Three acres of pasture for summer, with two acres of hay for winter, are required, or their equivalent. Thus, a cow becomes a burden of expense instead of a source of profit. It is within the possibility of attainment by ordinary farming to make a cow live and produce abundantly from the product of one acre. Fodder corn as a crop has not been known or valued sufficiently. As a direct result of dairy conventions, dairy meetings, and agitation of the matter, at least 20,000 acres of fodder corn were grown this year more than in 1887. Frequently I receive letters from farmers, saying that from the crop of corn which they were induced to grow, a talk on corn has been worth \$50 or \$150 to them for this year alone. The planting of the corn should be done early in the season. Rows, three feet apart, with three or four grains to the foot, will give a close enough growth. The plants need abundance of sunlight and air. Occasional harrowing until the crop is six inches high will prove beneficial. Frequent cultivation is essential to vigorous growth. Moulding up or hilling of the soil are of no observable benefit to the crop, and, as it leaves the land in undesirable condition for fall ploughing, it is not to be recommended. Broadcast corn should not be sown more than one bushel to the acre. Every hundred acres of land should have twelve acres of fodder corn. From half an acre of fodder corn as much cow fodder can be got as from two acres of hay at one ton and three-quarters to the acre. However, a crop of corn is not fit to feed before the middle of August. The pastures frequently fail before then. Some supplementary feed, in the shape of oats and vetches, or, better still, oats and peas, should be provided. One of the most promising possibilities of the silo is, that in it corn silage can be kept for use during July and August. The great drawback to the system of silaging has been the summer labor involved, when teams and men are busy with crops and cultivation. From the silo the feed could be distributed to the cows when stabled for milking, with the loss of very little time. The early stabling of cows in the fall of the year is an economical practice. The animals do better, and the pastures are left in a better state for the winter. One acre of fodder corn will yield more than enough to feed a herd of 20 cows for three weeks at that season. I of a larger number of persons per acre area, is of surpassing advantage to every branch of commerce, and the owners of every kind of property. Again, dairy husbandry in Ontario has done

agree with Mr. Leitch, that selling butter at 17 cents per lb. will not in itself pay; but if farmers could get 17 cents for as much cream as would make a pound of butter, that would be a better sale. The skim-milk is valuable for stock raising. In the matter of creameries referred to, I consider that farmers living near cities can do as well by making the butter in their own dairies; and if creameries are to be successfully established, they must be patronized by farmers living back from large commercial centres. Presently and in the past we have been making butter at the wrong season of the year only. That may be remedied by the course, already recommended, of having more of the cows begin their milking season between October and January.

Mr. R. Gibson, being asked to express his opinion on how it was that Shorthorns had so reduced in their yield of milk, and that the milking breeds did not gain more prominence, said that it had been the experience of breeders that their purchasers, although wanting a bull of a good milking strain, were generally so impressed with the grandeur and massive frame of a highly-fed beefing animal, that they would purchase their offspring in preference to the lighter, leaner and more wedge-shaped milking strain. With stock it was the same as in other matters—beauty was frequently preferred to utility. Owing to the same reason, breeders were compelled to keep their stock in such high condition.

Mr. Little said that the many feeders of corn fodder had found that feeding corn before some of the ears were closed did not have a marked beneficial effect on the flow of milk; in fact some had found that feeding such corn had actually reduced the flow of milk.

Mr. Leitch said that he was no advocate of the southern corn; that he thought it did not give as large a return of actual nourishment as the smaller northern corn; that several of his neighbors had tried it, but that none of them tried it a second time. Some persons considered that corn fodder was, pound for pound, more valuable than hay; but he preferred one pound of the latter to two pounds of the former. The only advantage he could see in feeding ensilage was that by its use the cows were prevented from being chilled by drinking a large quantity of cold water at a time, the ensilage giving them, little by little, a large portion of the water they required; but this could be as effectually prevented by warming the water.

Mr. Leitch, whose report on the dairy was deferred till next meeting, said that stock for dairy purposes could be improved by introducing Jersey and Guernsey cows, but they were too tender to thrive well in this rigid climate. The common Canadian cow would stand more hardship, and consequently was specially adapted to our climate. In this country the farmer had to depend so much on pasture, that many of the new theories of feeding advanced by scientific agriculturists were neither feasible nor practicable. This summer the very best cheese only sold for 8½ cents a pound, and the average price realized at the Model Farm for creamery butter was only 17 cents a pound, and it was very evident should this diminution in the price of those products continue, it would prove disastrous to the farmers of Canada. Australia, New Zealand, Denmark and other countries were, by the aid of their respective governments, establishing agencies in various parts of the commercial world. The Canadian farmers should delegate agents in different parts of Europe, who would look after their interests and put their products

on the market without being subject to the influences of combines. A few years ago Prof. Brown, of the Guelph Farm, advocated with considerable gusto the introduction of permanent pasture, but the experiments made under the direction of Prof. Brown were a complete failure, so far as permanent pastures were concerned. He considered the merits of the Model Farm were over-estimated, and that much of the system employed there for imparting instruction to the students was radically wrong. Instead of teaching them the principles of frugality, and giving them an idea of the responsibility of their calling, they were encouraged in indolence. The young men could be seen meandering about the Farm, wearing kid gloves; and such training as this would prove abortive in producing shrewd and practical farmers. The institution was paraded too much like a circus—by bluff and bluff.

Prof. Robertson said that cows relished the southern corn. That it required good cultivation and care, as it would otherwise give a very inferior return. Some of his neighbors had tried it this year, but while his was fully eleven feet high, theirs only measured two feet.

Mr. Gibson said that he had not yet had occasion to have a silo. He fed all his corn fodder in the forepart of winter, as after the end of February it became too dry. He asked the Prof. what change took place when the corn was cut and allowed to heat in a heap.

Prof. Robertson replied that so long as the fodder had not become dry, the protoplasm of the cells still retained their life; absorbed oxygen from the air, changed starch to sugar, and gave off carbonic acid. Another chemical change was that the corn was softened, and did not cut the gums of the stock. At the College the corn which was not used for ensilage was cut before feeding, and allowed to remain in a heap, covered with straw, not longer than ten days.

Agricultural exhibitions, the continuance of the Provincial Show, etc., will be discussed at the next meeting on the 15th of November, and any suggestions any of our readers may desire to send in will be cheerfully received by the Council.

Experiments at the Pennsylvania Agricultural Experiment Station, on the digestibility of corn fodder, that is, the stocks of field corn after the ears are removed, showed that taking the whole growth, ears and all, the stocks alone contained 37 per cent. of the total digestible matter. The practical meaning of this is, that the farmer who grows a field of corn, husks it on the hill and lets the stalks go to waste, leaves over 37 per cent. of the food value of his crop in the field, and contents himself with only 63 per cent. of its value.

The process of sheep shearing by machinery is now performed in Australia by an ingenious kind of device, the results, as represented, being very satisfactory. The apparatus in question is a very simple one, being made on the same principle as the cutter of a mower or reaper, and the knives are worked by means of rods within the handles, these in their turn being moved by a core within a long flexible tube which is kept in a rotary shaft, and wheels driven by a stationary engine. The comb is in the form of a segment of a circle about three inches in diameter, with eleven conical-shaped teeth. Each machine is worked by a shearer, and, as the comb is forced along the skin of the animal, the fleece is cut. The machine can be run either with a steam or gas engine, or by ordinary horse-power, and does not easily get out of order.

Stock.**Mr. John Miller's Imported Shropshires.**

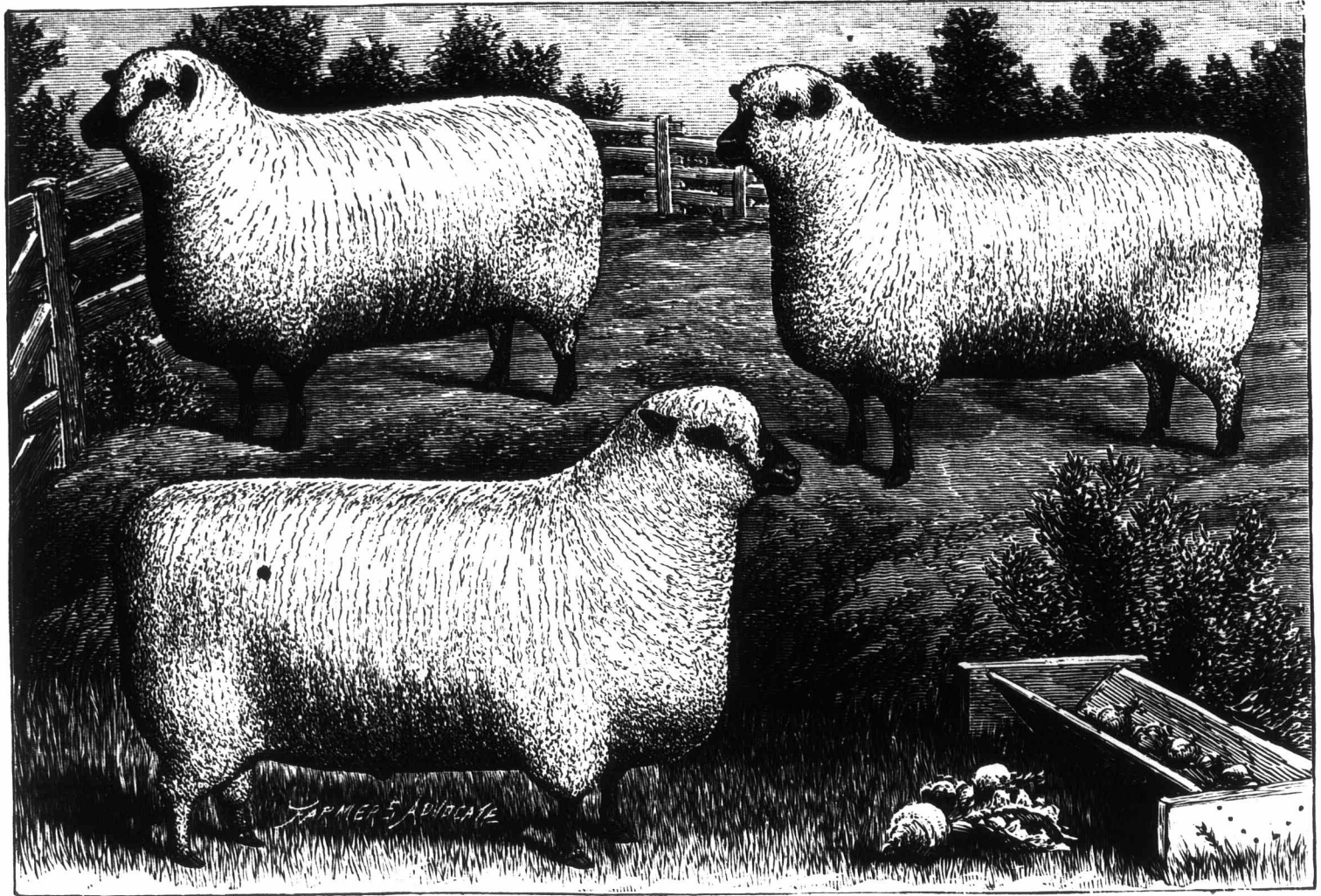
This illustration represents a group of imported and prize-winning Shropshires, the property of Mr. John Miller, of Brougham, Ont., who is one of the oldest, largest, and best known breeders in Ontario. His stock operations have covered a period of over a quarter of a century, and in all that time he has been very successful. Animals imported by him have invariably been well bred, and of good quality. His Clydesdales, Shorthorns, Shropshires, and Cotswolds, are well known all over the Dominion, and his trade with the Americans, who hold his stock in high esteem,

Rules for Entry in the American Shropshire Registry.

From time to time we have given notice to our readers, that if they wished to register their sheep in the above record, they must notice the rules, and comply with them. Especial attention has been called to Rule 5, which demands that "all sheep imported after July 1, 1885, shall be entered for registry within one year after they arrive in America, or they will be excluded from the Record;" also Rule 10, which says "all American-bred sheep born after January 1, 1887, to be accepted for registration, must be recorded within one year after birth." This date was extended to August 15th, of which we gave notice in a previous number. While attending the Canadian exhibitions, we became more than ever aware of

If you are in Chicago, we shall be pleased to have you meet with us at that time. I will read your letter before the association, and urge upon them the importance of adopting your suggestion of waiving the rules of limitation for a period of one year, and then take special pains to notify as many breeders as possible. We have now on record over eight thousand sheep. It gives us pleasure to send you such volumes of the Record as we have now on hand in exchange for your valuable paper. I feel that you can say, with some degree of assurance, that our association will waive the rule now so objectionable to Canadian breeders, for it must be apparent to the association, when their attention is called to the matter, that it is now working an injustice to many uninformed owners of pure bred Shropshires.

Sincerely yours,
MORTIMER LEVERING,
Sec'y-Treas.,
La Fayette, Indiana.



A GROUP OF IMPORTED AND PRIZE-WINNING SHROPSHIRES, THE PROPERTY OF MR. JOHN MILLER, OF BROUGHAM, ONTARIO.

has been very large. For many years he confined himself to the breeding of Clydesdales, Shorthorns, Cotswolds, and Berkshires; but in 1881, he commenced to import and breed Shropshires, and ever since that date his flock of Shropshires have been as famous as his Cotswolds formerly were. This year he imported 117 Shropshires—100 females, and 17 males. Among this lot were 35 English show ewes. The rams were also good; some of them being prize-winners at "Royal Show," of England. They have now on hand upwards of 200 head of these sheep, and a nice lot they are. Since the first of August last Mr. Miller has sold 250 head, besides a number of Clydesdales, Shorthorns, and Cotswolds.

Don't keep the stock in the fields as long as there is anything left to nibble at. It pays to give the pastures a rest before winter sets in.

the fact that these rules of limitation excluded a great many Canadian sheep to the injury of innocent breeders, who were not even aware that an American Association existed. Many of these parties asked us to intercede with the American Association, and obtain, if possible, a relaxation of the above rules; we did so, immediately on our return to the office, putting the matter as fairly before the Secretary as possible, and in reply we received the following letter:—

DEAR SIR:—We are in receipt of your valued favor of 6th inst. In answer will say, the matters of which you write, relating to the exclusion of sheep from our Records, by rules of limitation, is a matter worthy of consideration, and no doubt our rules are a little arbitrary, particularly to those breeders who were not aware of its existence and who owned pure-bred and standard types of Shropshires. The next annual meeting of our association will be held in Chicago, on Nov. 20th.

We can assure the American Shropshire Association that the action here promised would be a very popular one with the Canadian breeders, and would certainly increase the popularity and usefulness of the association in the Dominion. Any Canadian breeders who wish fuller information regarding the registering of their flocks, should address the Secretary as above.

While away from home, a weaning colt of mine broke through a barb wire fence and cut its front leg badly. It had been bleeding for eight hours when I got home. I took dry horse manure and held it on the wound for one minute, and the blood stopped flowing at once. An application of dry manure will stop the bleeding of a wound every time. This information may be worth a good deal to many of your readers, so I send it.

The Herefords, Polled Angus and Jerseys of Hillhurst.

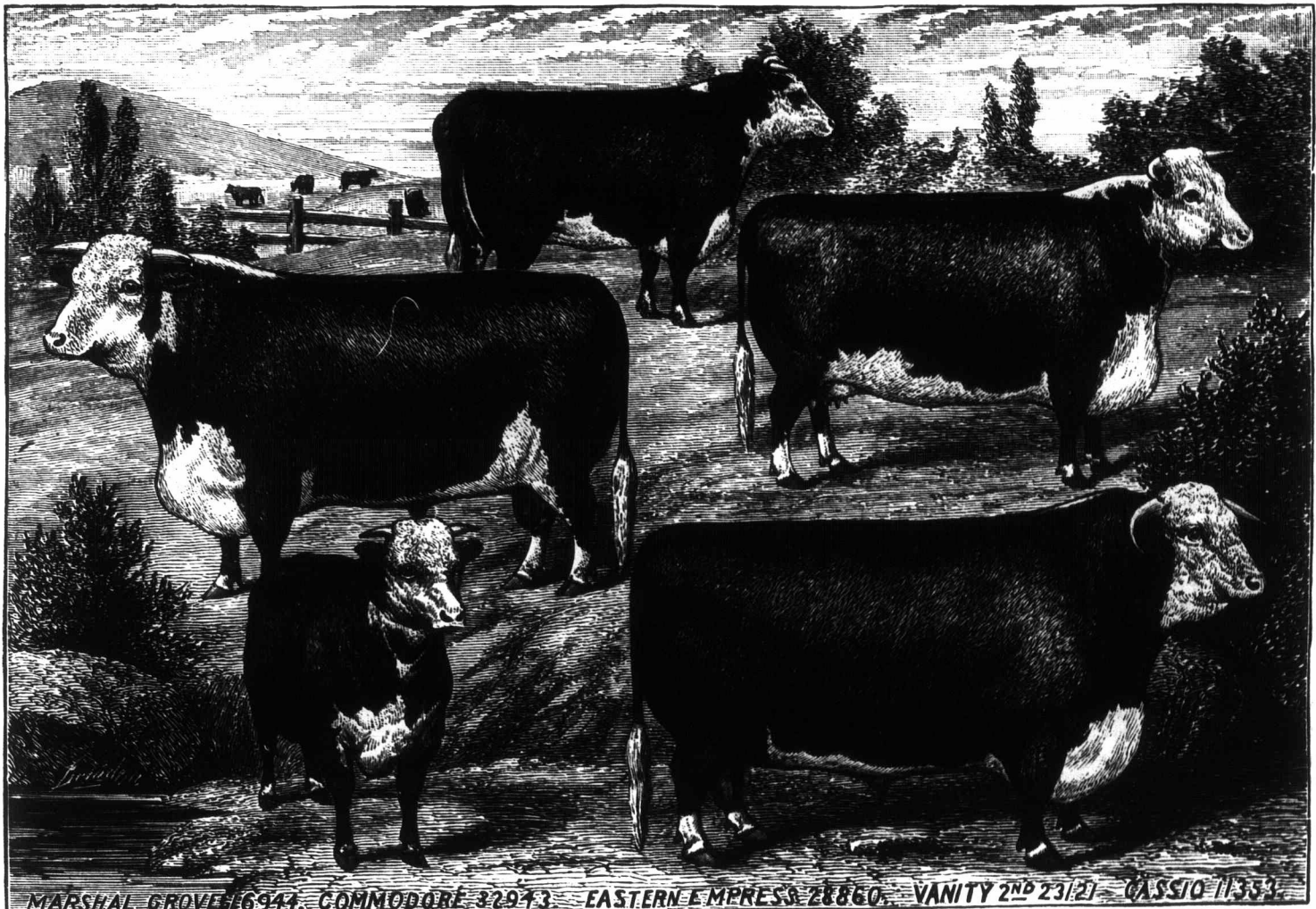
Nearly all, we may say all, of our thousands of readers, are acquainted with Hillhurst. If they have not actually seen this great establishment, they have heard of it scores of times; and many have seen the grand herds which have been exhibited from year to year in the past by Mr. M. H. Cochrane, who is to-day one of America's most famous importers and breeders. The owner laid the foundation of this establishment in 1865, by the purchase of some first-rate animals. The first purchases were soon followed by large numbers of imported stock of individual merit and splendid breeding. These importations have been continued almost yearly since the commencement.

Price, Mr. T. Myddleton (Beckjoy), Mr. A. Rogers (The Rodd), Mr. A. P. Turner, Mr. S. Robinson (Lyn Hales), Mr. J. Hill and Mr. Grasett (Wetmore). In 1885, ten heifers from Mr. L. H. Atkinson's herd (Letton Court), two from Mr. H. Haywood (Blackmere), two from Mr. H. R. Hall (Holme Lacy), and three from Mr. A. Rogers (by Albany, son of Lord Wilton), were added, and the following year five choice heifers by Mr. J. Price's Lord Wilton bull Monarch, were imported from the Court House herd.

Cassio was imported in February, 1883, and as a show bull and sire of prize winners, ranks with the foremost of any breed on either side of the Atlantic. Mated with the Chadnor Court females, he has produced several remarkably good bulls, notably Marshal Grove, who bids

Lyra, 295 guineas. Lady Prudence, Primrose 3rd and others secured at high figures. The principal families are all represented, and include 2 Prides of Aberdeen, 1 Charmer and 3 Sylphs, all tracing to Queen Mothers; 1 Erica, 2 Ruths, 2 Favorites, 1 Heather Bloom, 4 Lady Idas, 2 Blackbirds, 3 Minas of Castle Fraser, 1 Rose of Advie, 2 Westerstown Violets, 6 Princesses of Dearness, 5 Daisys of Skene, 3 Beatrices of Kin-stair, 2 Fannys of Kinnaird, 3 Rubys of Powrie, 6 Jeans, 2 Victorias of Westerstown, 3 Beattys of Garline, 1 Bonny Bee, 1 Montbleton Primrose, 1 Heather Bell of Baads, &c.

Paris 3rd, bred by Mr. W. McCowbie, at Easter Skene, was imported in 1881, and has left a remarkable impression on the herd, but his place is now filled by his son, Lord Hillhurst,



A CELEBRATED GROUP OF PRIZE-WINNING HEREFORDS, THE PROPERTY OF THE HON. M. H. COCHRANE, OF COMPTON, P. Q.

The Hereford herd consists at present of 81 cows and heifers, 3 stock bulls—"Cassio," his son, "Marshal Grove," and the Lord Wilton bull, "Ottoman" (by Franklin, of Maidstone), 1st prize at Gloucester show, 1885. It comprises four leading strains or groups—the Grove 3rd, Lord Wilton, the Chadnor Court (G. Pitt) and Longner Hall, Rarities, &c., and was founded in 1880 by selections from Mr. Pitt's herd (Chadnor), and those of Messrs. Morris (Lulham), Hill (Felhampton), Arkwright (Hampton Court), and Yeomans (Stretton Court). In 1881 five heifers were imported from Chadnor Court, together with a choice selection from the Longner Hall sale of the Rarity, Delight and Lovely families. In 1883, ten heifers were selected by the famous Lord Wilton, from the Stocktonbury herd, with others from the herds of Mr. John

fair to rival his sire in form as well as in breeding, while from the Rarities, Lord Wilton cows, and in particular when put to cows by his own sire (Grove 3rd), the result has been some very superior heifers

The Aberdeen-Angus herd numbers 68 cows and heifers, 2 stock bulls, "Lord Hillhurst" and "Lord Advocate" (both by Paris 3rd, and from dams of the Lady Ida family), and 22 bull calves. The herd was founded in 1881 by purchases from some of the best stocks in Forfarshire and Morayshire, followed by large importations the same and following years; amongst others, the well-known show cow, Blackbird, of Corksie 2nd; the Erica heifer "Erinna," bought at the Cortachy sale, 1882, for 380 guineas; Lady Ida 2nd (dam of Lord Hillhurst), bought at the Montbleton sale for 315 guineas, and

who is the sire of two heifers in the herd, headed by himself, and all of Hillhurst breeding, which was shown with remarkable success this season at G. T. Agricultural Association, Sherbrooke, Que., Kingston Provincial, Toronto Industrial and Western Fair, London, the yearling heifer "Jeanette" (by Paris 3rd) being pronounced by competent judges the best female of the breed on exhibition.

The herd of Red Aberdeen-Angus cattle, consisting of 14 females and 8 bulls and bull calves, has been bred from four red cows imported in 1883, the calves dropped during the present year by a red sire, being red of the second and third generation.

A herd of A. J. C. C. Jerseys, numbering twenty-eight females, is also bred from stock personally selected on the Island, and is headed by the prize bull, "Welcome Pogis" (by Canada's John Bull, dam Lucilla Kent), recently purchased from Messrs. V. E. & H. Fuller, Oaklands.

A Chatty Letter from the States.

From our Chicago Correspondent.

October prices for live stock in Chicago were:—Corn-fed beefs, \$4.25@6.50; grass beefs, \$3.00@4.25; cows and heifers and yearlings, \$1.25@3.00; bulk at \$2.25@2.50; store cattle, \$2.00@3.40; with New York dairy calves (steers) at \$8.00@12.00 per head; western range "natives," \$3.00@4.40; Texans, \$2.25@3.85. Hogs—heavy, \$5.70@6.90; light, \$5.50@6.40. Sheep—muttons, \$3.25@4.25; lambs, \$3.75@5.75; western feeders, \$3.25@3.80; Texas sheep, \$2.30@3.50.

Very few ripe early or prime sheep have lately been arriving.

In the fall of 1887, when the pastures were parched and the hay-lofts and corn cribs were scantily supplied, and even straw was at a premium, it was not wonderful that cattlemen were sending in all kinds of cattle, regardless of prices. Feed of all kinds and water was scarce, and owners had no choice but to send their cows, steers and young stock to the butcher. This fall it has been different. Never was the country blessed with more abundant crops, and yet the marketing of cows, heifers, calves and yearling steers this fall has been without a parallel in the history of the trade. During the past three months the receipts of range cattle have been very heavy, while the supplies of native beef steers have been held back. There were two reasons for this holding back, the first of which was that owners wanted to wait until the range cattle supplies for the season were pretty well exhausted, and the second was that the cattle were in unfinished condition, and owners wanted to feed some of their new corn.

However, the fact remains that "native" cattle in the corn belt have been held back, and, coupled with the other fact that plenty of cattle are in the country, large numbers of which will be ready for market before range cattle have ceased to come, does not afford much hope for advanced prices this side of the holidays.

There are some of the most experienced cattlemen who think that there are too many store cattle, and too big a corn crop on hand, to allow prices for beef cattle of ordinary quality to rule very high for a few months. At the same time, the prices are better than one year ago, and the best cattle are selling at \$6.00@6.50—very good prices.

The western range cattle, the good to choice Montana beefs, averaging 1,250 to 1,500 lbs., have sold at \$3.50@5.30 this year, mainly at \$4.00@4.75. These prices are very much higher than last year, though the quality of the cattle was never equal to the present season. This makes a difference in favor of the butcher, but not much to the owners, as it costs them no more to raise and handle a crop of good beefs than a crop of poor ones. The western range cattle this year average in weight about 100 to 150 lbs. more than last season.

The wool tariff question is being agitated this year with great interest. It seems to be a question of wool raiser vs. wool user. The latter represents much the larger interest, of course; but it is not always the larger interest that is able to wield the most political power.

The sheep raisers, however, are generally preparing themselves for the emergency of free trade in wool, and are paying much more attention to the mutton qualities of their sheep.

Mention was made last month of Mr. Robert Strahorn's successful transaction in Texas cattle. The writer wishes to state that the original price he paid for his cattle in 1875 was \$6 per head.

A good many Montana and Dakota calves have been marketed at \$2.75@3.75 per hundred, averaging 200 to 300 lbs. This is the first year in which such stock has been marketed from the Northwest. The men who have marketed calves and yearlings and cows from the ranges have calculated that the prices obtainable at market were preferable to taking the chances of heavy winter losses on such stock.

Feeding Colts.

Prof. Sanborn, of the Missouri Agricultural College, gives in the following paragraphs some good suggestions on feeding of colts.

It may be assumed in the absence of analyses of the entire horse, that it contains less fat than any other farm animal, and its growth is therefore relatively larger than that of any other domestic animal. Experience teaches us that fattening foods are misplaced when fed to a growing colt. All young animals that I have fed have shown experimentally the marked necessity of easily digestible foods. Let the colt, when first fed hay, have choice clover and the best fine hay, ground oats or ground peas, or barley meal, to which add a mere mite of oil meal and carrots. Skim milk may well be added, it will give a very nitrogenous diet.

The analysis of mare's milk shows a greater ratio of albuminoids (flesh formers) to carbohydrates (fat formers) than cow's milk, which is conclusive as to colts' diet when young. Don't "pinch" your colts. Feed liberally. The colt may be pushed forward as rapidly as the steer. This growth, if not that of fat, as it need not be, need not give a spiritless or effeminate colt, yet I would not press the point of early maturity as I would that of the steer, for the body may outstrip the acquisition of matured powers. If for sale, and moral issues left out, the most money will come from quick growth and early sale. It may properly be noted that tests by Boussingault and Stewart show that a pound of colt is made with as little fodder as a pound of steer.

The second winter, straw may be fed with clover and hay. The skim milk may be omitted, while a little meal may be added. I object to corn as a diet for growing colts. A French investigator, by an elaborate test, found that oats were especially good horse food. By an electrical apparatus he found an excitable principle in oats that he called a nerve, and that crushed oats were more active and not so enduring as whole oats. Oats are, by practical men, understood to favor more speed and endurance in the horse than any other food.

About one per cent. of the colt's live weight should be given in grain daily, and limit his feed of hay to three meals a day, otherwise a horse will eat more than he can digest.

A correspondent of the Farmers' Review says that when curing hams, shoulders, or bacon, he uses a brine made of 1½ lbs. salt and ¾ lb. brown sugar dissolved in 1 gallon of water. Before applying the brine he rubs the meat, after it is thoroughly cold, with fine salt, and lets it stand a day or two to draw off any blood. Then he takes it up, drains off the bloody brine, repacks it and applies the cold brine, in which he lets it remain not less than five weeks. Eight would not hurt it, for the sugar would prevent it from taking too much salt.

When Should We Feed Our Roughest Food?

Writing to the Rural New Yorker, T. D. Curtis says: The old-fashioned way was to begin the first thing in the fall to feed the coarse fodder, and to continue feeding it as long as it lasted. This was considered the proper thing, because it got rid of the coarse stuff early in the winter, and generally before severe weather came on, and left all the best feed for the colder weather, with a little choice rowen, perhaps, for the cows after coming in milk in the spring. The real need of the cow's system was not considered—indeed, was not understood—nor was there any better knowledge about the character of the food. Their desire was to get rid of the "roughage" first, without a thought as to whether it was economy to feed so much bulky and carbonaceous food. The fact that the cow had been feeding on frosted grass and ripe, woody fibre, which contained principally carbon, a large portion of which was indigestible, was not considered a moment. The only thought was to use up the poorest first.

Many continue this practice to-day. The science of feeding is very modern, and the elements of food are of comparatively recent discovery. What little is known is slow in getting out among the farmers. But the readers of the Rural ought by this time to know that the two classes of food known as nitrogenous or albuminoids, and carbonaceous or carbohydrates, ought to be judiciously combined in about the proportion required for the sustenance or building up of the animal system. In the fall or early winter, dairy cows need an additional amount of nitrogenous food along with the carbonaceous croppings of the fields, or the coarse fodder that may be thrown out to them. They require some good clover hay and a grain ration, out of which to elaborate milk and keep up the muscular system. The carbon is naturally in excess in their food in the fall season of the year and early winter, until snow comes—especially if they are allowed to run in a field of uncut corn stalks from which the ears have been snapped. They need but a moderate supply of this kind of food, which provides only heat, and lays on fat. It is fat-producing, but it is not directly turned into butter-fat in the milk. It appears to go first to supply fat to the cow's system, and from this storage probably the fats are drawn to enrich the milk. But only so much is appropriated to heating purposes—in keeping up the normal temperature of the body—and stored up as surplus fat, as is digested and assimilated.

If there is a lack of nitrogen in the food to be combined with the carbon, the excess of the latter clogs the system, and goes to waste in the manure heap;—that is, nearly to waste, for the carbon in the manure is of little value. Beyond six or eight parts of carbon to one of nitrogen in food, is a waste of the carbon, when the weather is only moderately cold. In zero weather, a larger proportion of carbon may be fed and appropriated. It is therefore better to feed the more nitrogenous foods in the mild weather of the fall, and increase the amount of carbonaceous foods as the weather grows colder, and especially if the cows are exposed to the colder temperature, instead of being properly confined in warm stables, as they should be. In mid-winter, when the weather is cold and sharp, animals exposed to it will eat

large quantities of straw, corn-stalks, over-ripe and damaged hay, or other carbonaceous food; at the same time they must not be deprived of a due amount of nitrogenous or muscle-and-milk-producing food. There is such a thing as an excess of this, but it is seldom fed in excess, save sometimes in the form of grain, though instances have been reported of disease and even death produced by feeding food too rich in nitrogen. This is the most expensive kind of food, and this explains why cows and other cattle so frequently suffer from need of it, while at the same time they are gorged to almost splitting from over-eating carbonaceous foods, in the vain attempt to satisfy the craving of the system for nitrogen. This carbonaceous food is comparatively cheap, and hence is often wantonly allowed to go to waste by feeding it in excess; whereas, did the owner understand the science of balancing foods, so as to avoid waste and still furnish the animal system with all the required elements of nutrition, he would save all his carbonaceous foods, and supplement them with an appropriate amount of the albuminoids. In this way, a waste of both kinds of food would be avoided, and a much larger amount of stock could be kept.

My advice to dairymen and feeders of stock generally is, to feed moderately of carbonaceous food while the weather is mild; to increase the quantity when it is colder, and prolong feeding it all through the winter and spring, as well as fall season. Stock will do better fed in this way, the same amount of food will go farther, and neither common sense nor the rules of true economy will be violated. The poorer the fodder, the more grain should be fed, and *vice versa*, with due regard to the character of both the fodder and the grain fed.

Stock Feeding.

The season of the year is again at hand when we have to turn our attention to the stall feeding of our stock. It is true that in some sections the feeding, or fattening, of steers is not so extensively done as in past seasons, and that the business has not been so remunerative as in some previous seasons; but this should inspire us to be more observing, economic and careful now, so that by reducing the cost of production we may again have a fair profit, notwithstanding a reduction in prices.

But, even apart from this industry, the feeding of stock or even cattle is by no means of small consequence, for the reduction in the number of fattening steers leaves so much more room for the increase of dairy stock, and with these, judicious winter management is of no secondary importance.

A good cow is a very profitable animal if judiciously and economically fed, but it is folly to expect that scrimping her food during her resting period will not seriously affect her flow of milk later on, and that, therefore, the food withheld is gained and economy is practised. As true economy consists in obtaining the largest returns for an investment, it is evident that in this case, where the loss of milk will be materially greater than the saving of the food, not economy but waste has been practised. This waste, not being noticed at the time it occurs, is, however, too often allowed to take place by some farmers. And it is not the only waste in the feeding of stock, for many others may be cited occurring from either carelessness or want of better knowledge. Among these, which must almost invari-

ably be attributed to the former cause, is the actual wasting of the feeding stuffs in the passages and stalls; but as every farmer with enough "spunk" in him to be worthy of the title farmer, should most carefully guard against any such loss without even having his attention drawn to it, we will pass this branch without further notice and proceed to discuss those which are not so easily noticed by the feeder. Among these are the feeding of the grain separately, that is, feeding it without previously mixing it with some coarse substance; compelling them (the stock) to drink ice-cold water; allowing them to drink much water at a time, especially shortly before or after feeding; keeping the stable too warm, too cold, or badly ventilated; not using the stock gently; not attending to them regularly; giving them too much sloppy or boiled foods; not feeding the different constituents of the food in the proper relation, &c., &c. Leaving the others to be treated of more fully on some future occasion, we shall only touch upon the last one we mentioned in our list.

As most of our readers will know, hay or any other food is composed of a large number of compounds, but for our purpose we only need to consider the three most important groups of compounds, viz., albuminoids or crude protein, carbohydrates or nitrogen, free extracts, and fats. Of these the albuminoids are the most valuable, as they, besides being able to form the fat in animals, are the only substance capable of producing flesh and replacing the muscles, which are wasted more or less in a working animal. The fat ranks next in importance, and may for our purposes be considered to be a more concentrated form of the carbo-hydrates, as both these substances are utilized in the production of animal heat and the deposit of fatty tissue in the animal system. The fat produces, however, 2½ times the amount of animal heat, and deposits by far the greater portion of animal fats; in fact, until lately it was believed that the carbohydrates could not be transformed into fat in the animal system. A small percentage of fat is also very beneficial in aiding the digestion of the albuminoids, but too much fat materially retards or prevents the digestion of that substance. The albuminoids and carbo-hydrates have also to be fed in relative proportions to avoid loss. In the different purposes for which the animals are fed this relation differs: thus, in cows giving milk, the best relation has been found to be 2.5 of albumen, 12.5 carbo-hydrates and 0.4 of fat; while in growing cattle (nearly full grown) the best relation is 1.6 of albumen, 12.0 of carbo-hydrates and 0.3 of fat. A slight deviation from these figures may frequently be advisable, to allow for differently-constituted animals and for the difference in their surroundings. But large deviations are sure to result in a loss of the constituent, fed in excess—although the feeder may be entirely unconscious of it, thinking that he is getting all that can possibly be got out of the food—besides frequently interfering with the digestion of the other substances.

In our December number of last year we published a table giving an analysis of various fodders, and all the information necessary to figure out properly balanced ration; but if a sufficient number of our readers wish to have the tables republished, with the same or fuller information on how to use them, we shall be glad to do so.

The stock on the farm should always be tame. It is not a favorable indication to have them fear their owner.

Breeding and Feeding Pigs.

BY J. Y. ORMSBY, V. S.

(Read before the Dairy Conference, held at Kingston, Ont.)

During the last few years the almost entire failure of the wheat crop throughout Ontario, together with the very low prices obtainable for all kinds of cereals, has forced upon the farmers of this Province the conviction that they can no longer depend on grain-growing as a means of livelihood, far less as a source of profit, and as a result we hear asked on all sides of us the question, "What branch of farming pays best?" and in a great number of cases we find the answer given, "Dairying."

Experience has shown us that we have, if not throughout all this Province, at least in the greater part of it, a country admirably adapted to this very important industry; and with a ready market in the old country for all the first-class dairy products we can manufacture, it is safe to say that before many years dairy farming will be, if not the leading, at any rate one of the most important, branches of our agricultural industries.

The agitation that has been going on of late years in the press with regard to matters strictly pertaining to the dairy, such as the better feeding and care of milch cows, and the production of a better article of both butter and cheese, will have a most beneficial effect, there is no doubt, and our only hope is that the efforts of those who are engaged in this good work may be crowned with success. In dairying, as in all other industries, in these days of keen competition, it is very necessary that most careful attention be paid not only to the principal, but also to all the minor branches of our business. Granted, then, that the principal object of the dairyman is to produce an article of butter that will command the highest price on the market, at the least cost, we find that one very important point with him is: how to dispose of what are generally spoken of as the waste products of his dairy; in other words, the skim-milk and buttermilk. That these can be used to the best advantage in the production of good sweet dairy-fed pork, has, I think, been clearly demonstrated by our best writers on the subject, and, consequently, the object of this paper is not to prove this, but rather, taking this as a conceded fact, to point out how we can produce the best and sweetest pork and bacon with the aid of two such important feeding stuffs as skim-milk and buttermilk.

To be a successful pig-breeder one of the most important points is: To have a distinct understanding as to what type of pig you want to produce, before you set about your work; keep that type, or model, in your eye and then by a careful system of selection and coupling, endeavor to produce an animal as nearly like your model as possible; and here it is we find the majority of our farmers at fault; too much of their breeding is done at hap-hazard, on a happy-go-lucky sort of system; one man uses an inferior boar because he gets his services for fifty cents; another does the same, not for this reason, perhaps, but because the boar in question is owned by his next neighbor, and it is too much trouble to take his sows away two or three miles to a pure-bred pig; while a third, unlike the other two, takes his sows to a pure-bred boar, and does not, perhaps, grudge the few cents extra it costs him;

but then he goes no further—the fact that the pig is pure-bred is sufficient; it never occurs to him to question whether he will mate well with the sow with which he is about to be coupled; consequently, he is disappointed with the result, and, as I have noticed in a good many cases, instead of trying to find out where his mistake has been, he gives vent to his disappointment by declaring that “this pure-bred stock is all humbug, anyway and there is no money in it for poor men;” and so he goes back to his old way of doing things, breeding first to one pig, then to another—this year to a pure-bred, next year to a scrub—and so on, never having the least idea as to what sort of a litter he is going to get, and, as a result, when he comes to do his marketing, instead of having a nice, even lot of porkers that will bring the highest price, he has a lot of miserable brutes of all sizes and shapes, that will not at the outside bring more than 20 to 30 per cent. less than the top market price.

To return, however, to the subject of “Breeding Pigs,” the first point we have to consider is, “What style of pig is best suited to the requirements of the market of to-day?” And here we find that there has been a great change in public opinion in the last few years, and, I am sorry to say, we also find that our Canadian farmers have not by any means manifested a disposition to keep pace with this change. In support of this statement I may be allowed to make some quotations from a letter written to my friend, Mr. Cheesman, by Messrs. Wm. Davies & Co., of Toronto. After stating that they have been for over thirty years engaged in the business of packing and curing pork, they declare that, while a few years ago the demand was almost entirely for heavy fat pork, public taste now seems to have changed completely, and what the market now calls for is light, fleshy meat. This opinion is, I may say, identical with that expressed by such authorities as Mr. A. W. Shaw, of Limerick; Messrs. Harris, of Calne, Wiltshire, and many other well-known firms in the bacon trade; to return, however, to Messrs. Davies & Co.'s letter, we find the following statement:—“During the year 1887 we slaughtered 63,457 hogs. Owing to the indifference of the Canadian farmer to this department of agriculture, more than half of this number was obtained on the other side of the line. When buying hogs in the markets of the United States, we have no difficulty, owing to the large number regularly for sale, in picking out exactly the class that suits our purpose. Of this kind we purchased last year 33,113. They averaged 176 lbs., and cost, laid down here, \$5.19 per cwt. Their yield was 78 per cent. dressed weight. Our Canadian purchases consisted of 26,244 prime hogs, between 140 and 200 lbs. They averaged 174½ lbs., and cost \$5.25 per cwt. In order to secure these we were compelled to take 4,100 unsuitable hogs, the objection to them being that they were either too heavy or too light, half fed or rough. These averaged 223½ lbs. and cost \$4.47½ per cwt.”

Just think of this: out of 63,457 hogs slaughtered by one firm in Toronto, 33,113 were purchased in the United States at a cost of \$298,017; in other words nearly \$300,000 went from Toronto in 1887 to pay for American hogs, while the year before our farmers were content to sell their barley for from forty-eight to fifty-six cents a bushel, and then sit down and “howl” about hard times! And let me also call your attention to

the fact, that the reason these hogs were brought from the United States was, not that there were no more hogs to be obtained in Canada, but that the class of hogs on the Canadian market was not suited to the requirements of the bacon trade; witness the 4,100 hogs purchased by Messrs. Davies & Co. against their will at a cost of \$4.47½ per cwt., or 77½ cents per cwt. less than they were willing to pay for first-class hogs. Now, let me try to point out where I think our farmers are at fault in their judgment with regard to what kind of pigs to breed. They go in too much for weight and fat, while, as I have already pointed out to you, all the demand is for light, lean meat. Another thing, they pay too much attention to the hams, while neglecting more important points. For example:—I continually hear the remark made on a show-ground: “There's a good pig; look at his hams; look how square he is.” Now, it is not the square, heavy-quartered pig that gives the best return; it is the lengthy, deep-sided pig. If we examine the price-lists of any bacon-curing establishment, we find that the highest prices are paid for those parts of the carcass that lie between a line drawn straight down behind the shoulder and another drawn parallel to it in front of the ham; indeed, I may say that when in Ireland two years ago, I was told by a large bacon-curer there that, taking a pig bought at so much per lb. all round and dividing the carcass as I have mentioned, he would lose money on the first third, *i. e.*, the head and shoulders, would clear himself on the hind third, *i. e.*, the hams, &c., and would look to the middle third to make up the deficiency on the front and to make his profit. The moral to be drawn from this being, in a few words, breed a pig with as much middle as you can without being rough or coarse, or, to quote the words of Mr. A. W. Shaw, who is head of the second largest bacon-curing establishment in the British empire, “What is really wanted is a pig that is neat in the head, light in the neck and shoulders, deep in the heart, thick in the loin, stout in the thigh and short in the legs.”

[TO BE CONTINUED.]

The best way to market oats is to feed them to good, young draft horses.

It is said that in the Northwest, the expense of keeping sheep yearly is only thirty cents per head.

Disinfectants are better than disease. Look into the condition of cesspools, sink drains, poultry-houses, etc.

If farmers had the same relish for swapping experience that they have for swapping horses, they would all be the gainers.

When the horse shies at some object, or stumbles, do not whip him. Help him to stand, and show him the folly of his fear.

For colic in horses, take one teaspoonful of the salt of tartar to one pint of water; shake well, and drench the animal with it, and if not relieved in one-half hour, repeat the dose; but I do not think you will have to repeat the dose.

A New York farmer argues that one ton of clover hay contains nine or ten per cent. of albuminoids, while a ton of timothy hay has only 5½ per cent. of these valuable nutriment. Clover hay is always cheaper than timothy, and oftentimes 30 to 50 per cent. cheaper. Hence farmers should grow timothy for sale, and clover for feeding out to their own stock. Again, Mr. Stewart claims that if a ton of straw containing 2 or 2½ per cent. of albuminoids is mixed with a ton of clover hay, the mixture contains the same nutritious substances as two tons of timothy hay, certainly another argument in favor of feeding the clover.

The Farm.

Beautifying Our Farms.

BY JOHN CAMPBELL, JR., WOODVILLE, ONT.

This is a line of our business which does not get in this country the share of attention that it is worthy of. The reasons why are not difficult to discover. Necessity has compelled farmers in by-gone years (and, to a certain extent, does yet) to devote their time closely to produce from their farms the means to live by.

We cannot but admire the pluck and perseverance of the pioneers who have made our country what it is. Considering the most difficult work of clearing heavily-timbered land, and the many hardships they had to endure, can it not be truly said, that the equals of our forefathers as settlers would be hard to find? Many of them did more or less in the way of beautifying, as they plodded on. Some can remember the old shanties, roofed over with the hollowed-out, split logs, many of which showed good taste, in the neatness seen within and without.

Now, that such a grand country has come into our possession, should we not do our part in improving it?

No doubt we have many difficulties to contend with, and much remains to be done. Notes and accounts have to be met; mortgages compel attention; draining is very necessary; also building, and many improvements: but yet I believe the time has come when we should aim at adding to the general appearance of our homes and farms. Improvements of this kind may not increase our incomes, but will surely enhance the value of our properties, and add sunshine to our lives.

It has been said that when passing through the country for the first time, a close observer can guess what the character and circumstances of the occupants of the farms he passes are. Were that strictly correct, it would follow that wherever we see disorder, neglect, and want of harmony prevailing, we would find lack of means, or spendthrift habits, as the cause. I much doubt if either is the cause, in a large number, or perhaps in the majority of instances; for can we not call to mind some whom we know are temperate and wealthy, but looking over their farms, would lead us to believe they were either drunkards or in poverty.

Let us, in imagination, take a trip through the land. And now we come to a fine farm, apparently well tilled, with good out-buildings and a splendid brick house, large and finished throughout in a first-class manner. We decide at once, and rightly, that the owner is a prosperous farmer, with a good bank account. But, after all, there is something lacking. There is a cold, bleak look about this home, and probably it is cheerless within. It may be the want of trees, or the rough rail fence with which the door-yard is enclosed, or the heap of rubbish here, and the bunch of burdocks yonder.

Whatever it is a closer inspection lessens our admiration, as the surroundings are sadly out of keeping with the fine house.

We take our leave, and soon come to another home. It is rather small, compared with the one we left, and, did it stand alone, we would deem it plain, if not ugly. But with its immediate surroundings all that we can desire, the whole is pleasing to behold. It has its grass plot neatly

planted with shrubbery. There are well-kept walks wherever they are needed; also flower and vegetable gardens in good order. The fences are of picket, and none missing. If we enter this dwelling we find it so cosy and inviting that we say to ourselves: How pleasant it must be to dwell there, and how fortunate is the farmer whose wife is capable of contriving a home so beautiful within and without. The beauty within is not the result of a large outlay of money. Its furnishings may be plain and inexpensive, but so arranged and kept that the effect is charming. We will now stroll to the barnyard and fields; but, surely, there is some mistake. This cannot be part of the farm where the home showed to such good advantage, and whose owner is in easy circumstances. Yet, upon inquiring, we find it to be the case; and what a contrast! Here the buildings are somewhat dilapidated, doors hingeless, windows stuffed with straw, an old machine half buried in manure, and a plough with a broken handle, so lying that an innocent animal running against it may be maimed for life. If we look over the fields, they are in keeping with the barnyard. Fences are tumbling down, and the gates (if there were any) are thrown down and trampled on. The contrast is so marked as to lead us at once to infer that the farmer has no such taste for beauty and order as his wife possesses. And we cannot help exclaiming: What a pity! Once more we pass on, and soon approach a farm which at the outset impresses us with its beauty, and with the thought that here all is in harmony. The house and all about it are similar to those last visited. The outbuildings, though not unusually expensive, are in good order, having no loose boards rattling with the wind, neither broken doors nor windows. The implements when not in use are carefully housed, and the worn-out, useless ones, are nowhere to be seen. The stock, though not of the fancy, pedigree kind, are yet good, and show no neglect, judging from their appearance. The fields are conveniently laid out, and the fences also are in good repair. The owners are not at all rich in dollars and cents, compared with the farmers previously visited; but we must admit that the couple who manage this home and farm, where everything is pleasing to the eye, are mistress and master of their business.

Such is my ideal farm, and idea of a beautiful home. Some one raises an objection by saying, "I cannot afford the outlay necessary to make my farm attractive." We know that, were all wealthy, our farms might be made so as to be admired by the passer-by; but who will venture the assertion that they would? It is not a question of means so much as the lack of will and taste. But comparatively few have the means to build, plant and adorn, within a year or two; yet that is no reason why nothing but what is absolutely required to gain a living should be done.

Tree-planting, judiciously done, is one of the ways by which we can add to the beauty and value of our farms; and it does not require a large outlay of either time or money. A belt of trees for a wind-break will become yearly more beneficial, and is an ornament on any homestead. If we have only an inferior house, and cannot afford a better, why not plant trees now, and they will be growing, until the better home is provided.

Removing all kinds of useless, and worse than

useless, rubbish, greatly adds to the appearance of house, yards and fields.

Is there anything that makes a farm more positively distasteful, than to have a generation's worn-out utensils and broken crockery lying about the door-yard; and old machinery, heaps of decaying timber, broken lumber, with a hundred and one utterly useless things which are so often seen scattered about lanes and barn-yards? A dry, covered well or pit, half-a-dozen feet deep, will keep forever out of the way and sight the broken dishes, old tinware, and all the accumulation of that kind for a score of years; and the gathering of rubbish into heaps to burn will not require an outlay of cash, and not as much time as some of us spend idly during six months.

The buildings and fences can be also kept in repair without any large outlay, if always attended to at the right time.

"Last, but not least," the garden should have its share of attention; for one well kept is profitable, and without it we cannot have that harmonious whole which I have tried to lay out in imagination before you.

Should Land for Corn be Plowed in Fall or Spring?

Director I. P. Roberts writes in Rural New Yorker: If the land is a somewhat tough sod and not very sandy, by all means plow it in the fall; open all dead furrows to quickly relieve it of overflow. In the spring the land will get warm and dry early, when a good harrow—the Acme and the Spring-tooth are very good for the purpose—if liberally used, will put the land in the best possible condition. If the land is a clover sod, it would be quite as well to defer the plowing to the last moment possible before planting. Grass roots, like those of timothy and blue-grass, decay slowly and furnish little nutriment to the corn crop till late in the season; they also bind the soil together, and prevent, to some extent, its becoming warm early in the season when corn needs both warmth and fertility in our cold, backward springs. Corn, too, needs plant food readily available in the early stages of its growth. By fall plowing tenacious sod, by the action of the elements and by the better preparation of the soil, we may obtain most easily and certainly the necessary conditions for the best results. On the other hand, clover tends to make land friable; it decays very quickly, and where abundance of water is present, and no living plant upon the soil, the nitrogen set free is likely to be seriously diminished by leaching; so the less time that elapses between plowing clover sod and planting, the better. If the clover can make a start of two or three inches in the spring before it is plowed under, the mass of nitrogenous matter in the leaves and roots, which decay very quickly, perceptibly elevates the temperature of the soil, thereby hastening germination and growth. The tendency of vegetable matter in sandy land is to decay too rapidly, so a sod should never be plowed any great length of time before the crop is planted upon it where the land is already too loose and admits air too freely, as too rapid decomposition and loss of nitrogen will ensue.

It was discovered by the New York Experiment Station that the seed corn nearest the tip produced the strongest and best plants, followed by that from the butt, while that from the middle was poorest.

Farming Affairs in Great Britain.

[From our English Correspondent.]

London, October 11th.

OUR PROTRACTED HARVEST.

The beginning of the end of our tedious harvest is at last in sight. Throughout the greater part of England the fields are all cleared, and it is only in the northern counties that there is still a considerable quantity of the grain crops ungathered. In spite of the unusually early touch of winter, including a heavy storm of snow in the north of England on the first day of the month, the weather has been suitable to harvesting operations, and nearly all the crops got in since the end of the first week of September have been secured in good condition. Therefore, instead of scarcely any grain being fit for market this side of Christmas, as there seemed reason to predict at the end of August, and for a week later, nearly half the wheat and three-fourths of the oats and barley are dry enough to sell at any time. The fine weather, too, has matured the potato and root crops, and has enabled farmers to make a good lot of hay of their second cut of grass and clover, the hay of the first cut having been half spoiled by wet weather. Thus there will be abundance of keep for live stock during the winter; and this will keep up the prices of cattle and sheep. Potatoes, in spite of a good deal of disease, are exceedingly abundant and extremely cheap.

MARKETS AND FAIRS.

The price of wheat, after the recent point of decline, is again advancing. A good sample of old English is now worth 45s. per quarter of eight bushels, and new Canadian of fine quality is worth 44s., if not 45s. Canadian farmers may rely upon making good prices of what wheat they can send at this season; and as really fine samples are scarce, anything like first-rate grain is, and is likely to be, at a premium. It is to be borne in mind that the American crop is not only a short one, but that a great deal of it is of poor quality and light in weight, and as this is the case also with most of the European wheat, those who have grain of high quality should be careful to "open their mouths widely enough" when they offer it for sale. The same is to be said of fine malting barley, of which, I am informed, Canada has a considerable quantity to spare this year. Cattle and meat, again, are likely to sell well throughout the winter. At the fairs and sales of this autumn, cattle have sold at about 20s. to 30s., and sheep at 5s. to 7s. a head above the prices of last year. This week the meat trade is dull; but probably the dullness is only temporary, supplies having been excessive. Butter is now getting up to its winter price, as much as 120s. per cwt. of 112 lbs. being paid for the finest quality of European, and American and Canadian going at 80s. to 90s. Prices will probably be 5s. higher by the time this letter reaches its destination, as they are rising every week. In the case of cheese, future prices are doubtful, the prophets predicting very low prices. On account of the extraordinary abundance of feed during the summer and early autumn, the make of English cheese has been a very large one, 30 per cent. more than the short make of last year, it is supposed; while imports have lately been heavy. There was a rise, however, at the close of last week, and good Canadian is worth 48s. per cwt., ordinary lots being 40s. to 44s. For September makes of Canadian

or American, yet to arrive, the price is 50s. to 52s., thus showing that a further rise is expected in the trade. Whether this hope will be realized or not will depend to a great extent upon imports. During the nine months ending with September, we imported 1,441,255 cwts. of cheese, as compared with 1,397,350 in the corresponding period of last year. Out of the quantity for the present year, 423,143 cwts. came from Canada, against 431,755 cwts. last year. These figures show a small decrease in imports of Canadian; but for September alone the quantity was 102,369 cwts., as compared with 81,344 cwts. from the Dominion in September, 1887, and 85,743 cwts. in the same month of 1886.

THE DAIRY SHOW.

The thirteenth annual show of the British Dairy Farmers' Association is now being held in the Agricultural Hall, London. The entries of cattle and butter are fewer than those of last year, but the quality of both is excellent. There is a particularly fine lot of Shorthorns; and the Jerseys and Guernseys, as usual, are well up to the mark. There are also some good specimens of the Polled Norfolk and Suffolk cattle, which are growing in popularity on account of their excellence as dairy and butchers' animals alike. In my opinion, there is no breed which so well combines the two qualifications. These animals are much smaller, and consume less food than Shorthorns, but give more milk in proportion to their size. Indeed, the records of some of them are equal to those of the best Shorthorn cows. They are wonderfully quiet and docile, and are well fitted to roam at large, being harmless. At present there is a good demand for this breed in America.

One of the most interesting features of the Dairy Show is the butter-making competition. This is divided into three classes, the first being for men, the second for farmers' wives and female assistants, and the third, a champion class, for a final competition between the prize-winners of this out of the two previous years. It is not finished at present. Out of 276 cattle (cows, heifers and bulls), 53 are entered for the milking competition, the complete result of which will not be published till the Journal of the Association comes out. There are 72 goats, 35 lots of pigs, and a great show of poultry, also, in the Hall. The other principal entries are:—166 of cheese, 298 of butter, 53 of cream, and 44 of bacon and hams. A prize list would not, I presume, be of sufficient interest to Canadian readers to justify its insertion, as it would occupy a great deal of space. In the case of the novelties in the implement and machinery department, however, we have a topic which is interesting to dairy farmers all the world over. The whole show of dairy appliances is a very good one, and it includes several inventions new to this show, though some of them were brought out at the Royal Agricultural Society's Show in July. The most important novelty is a cream separator, only just brought out. It is the invention of Mr. Hansln, of Copenhagen, a man who has had a great deal to do with this class of machines, and the manufacturers are Farmer Robey, Clark & Co., of Gainsborough, England. It is a remarkably strong and simple machine, the only one at present finished for steam power; but it is being made for hand power also. Like other separators, it is on the principle of a spinning-top; but the spindle on which the separating vessel revolves is unusually short, thus

giving steadiness of revolution and freedom from vibration. The spindle revolves in a gun-metal back on an adjustable pivot, fixed in the stand at the bottom of the bearing. The vessel is turned out of a solid ingot of steel, and may be run with safety, it is said, up to 10,000 revolutions per minute, at which speed every machine is to be tested before being sent out. One advantage is that the machine is entirely self-contained, and requires only to be set level on the floor, without any fixing; thus there is no expense for foundations. It has been worked satisfactorily, I am told, in Lincolnshire; but one of the parts was broken in transit to the Show, and it could not be worked till today; and, as I had previously been there two days, I would not go again on purpose to see it in action. Another new separator is a remarkably handy little hand-power machine, to be fixed on a table—a mate to the Laval "Baby" machine. It is manufactured by Watson & Laidlaw, of Glasgow, the makers of the now well-known Victoria machine (for steam power), and the exhibitors are Freeth & Pocock, of London. A boy turned it easily at the show, and so did I—finding it as easy to turn as a full-sized grain-dressing machine. It is supposed to separate 14 gallons of milk per hour, and its price here is only £12. Like the Victoria machine, of which it is a small imitation, it is self-emptying—a considerable advantage. The Victoria received the highest award at the last show of the Bath and West of England Society, and, in my opinion, there is no better machine out. The smallest of dairy farmers can now afford to obtain one of the small hand-power separators. The Dairy Supply Co., London, show three appliances, new to the Dairy Show, but exhibited at the "Royal" last July. One is an elevator, to be attached to a separator for raising the separated milk; the second is a heater for warming the milk as it flows into the separator; and the third is a very handy, self-registering milk-weigher, portable, and standing on three feet. A remarkably useful curd mill has been brought out by Bracher & Co., of Wincaster, Somerset. The teeth are chisel-pointed and slightly curved, and are fixed in double spiral form on a spindle which revolves and passes them between final parallel knives. The form of this mill makes it self-feeding, in the state that the curd is drawn in, and does not require pushing down. Pond & Son, Blandford, Dorset, show a new steam boiler and hot-water circulating apparatus for use in cheese-making. There are several minor novelties; but these are of scarcely sufficient importance to colonial dairy farmers. Butter packages, for instance, intended only for small lots (12 lbs. or 24 lbs.) of butter, for which there is a separate class, of course, would not be worth exporting.

A NEW WAY OF SELLING SEPARATED MILK.

There is some trouble in getting rid of separated milk at a satisfactory price, and pigs do not pay much for it in this country. It is, therefore, with interest that an announcement made by Canon Bapt, an energetic promoter of improved dairying in Ireland, was received at a meeting held in connection with the Dairy Show. I do not know whether you have in Canada the automatic machines for fixing at railway stations and in the streets, for the sale of sweetmeats, cigars, lights, &c. A buyer puts in his penny, and is then able to pull out a tray containing what he wants. Well, Canon Bapt has adapted this machine to the milk trade. He is about to

fix up in various parts of Dublin automatic machines for the sale of separated milk. The customer will put in a penny, and will be able to draw out milk in a small tin vessel, which he will be entitled to take away if he likes. Probably these tins will be simply stamped out of a sheet of tin, and will cost less than a farthing each.

A GOOD TIME COMING.

When I was a boy a popular song, referring to farmers, then in the midst of one of their periodical depressions, had for a chorus the refrain—

"There's a good time coming, boys,
Wait a little longer."

Well, the poor farmer has waited long enough, goodness knows; but at last, I really believe, he is going to have better times. The signs are many, though farmers here are slow to admit that they can see the "silver lining" of the cloud that has so long hung over them. If trade improves, agriculture will likewise become more prosperous, and farmers who go into business now, with rents low and nearly everything cheap to buy, may make their fortunes. But they must take care—and this applies to colonial and American farmers—not to grow too much wheat, because when wheat goes down in price it drags down all other kinds of grain with it.

An Unbiased Opinion on Ensilage.

Professor Alford says:—"Looking over my records, I find that with cows of like age and breeding, those which calved in September and October gave from 800 to 1,000 pounds of milk more per year than those that were fresh in the spring. I also find that the winter milk is considerably richer than that made from succulent pasturage of the spring and early summer, and from one to two quarts less of it is required to make a pound of butter. I estimate that two pounds of butter will bring as much money in winter as three pounds in summer. I can also show that cows fresh in the fall have a longer milking period than spring cows, inasmuch as about the time they would naturally commence to fail, the fresh pasturage comes on and gives them a good send-off for the summer."

The remarks of the Professor contain more information than they seem to show at the first glance, for from them we will be able to glean some facts about ensilage, a subject which creates so much sensation at the present, and on which much opposition in opinion prevails. As in this, like in many other booms which have preceded it, unbiased opinions are difficult to obtain, and accidental experiments like the above are of considerable value.

If the observations of the Professor are correct, it is evident that either the cows calving in spring were not properly attended to during the winter, or that the claims of the ensilage advocates are at least exaggerated. As every intelligent farmer would not neglect his cows at any time, and as it is one of the most essential points in experiments to have all the influences affecting the experiment the same, save, of course, the one with which the experiment is conducted, it is not likely that the difference in quantity of milk produced can be attributed to any other cause than the difference in the milk-giving qualities of the dry foods fed in winter and the succulent diet given by the grasses in summer. Now, contrary to the popular impression

of the feeders of ensilage, the Professor seems to have proved that the dry foods fed during the cold months of winter gave a larger flow of milk than the grass (the most perfect form of ensilage) gave during the summer, and the summer is the season of the year when succulent foods, if necessary, are most required. For, in order to keep down the animal heat, a certain amount of perspiration is necessary. This being drawn from the water in the body, necessitates an extra supply of this substance to be taken into the body, and this extra supply is most perfectly obtained in the succulent grass. In winter, however, as has been proved by experiments, this extra supply of water is very injurious, as both heat and force are required in expelling it, and heat is lost. It is owing to the great amount of water which turnips contain that they, if fed in too large a quantity, have been found injurious to economical feeding.

The quality of milk produced by dry food, the Professor claims, was also better than that obtained from grass; and I believe him; for the more water the food contains, the more water will be found in the milk. The practice of adulterating milk in the cow by giving her sloppy and highly carbonaceous foods is, as every dairyman knows, a very expensive one, and would, I am convinced, be dropped if the milk were sold according to quality.

Some may claim that, although the extra quantity of water in ensilage is injurious, the greater digestibility and the more perfect saving of the ingredients of animal nutrition in the foods will more than counterbalance this; but even this, if critically examined and compared with facts established by experiments, will not "hold water," for repeated experiments conclusively prove that simple drying does not diminish digestibility of foods. But, on the other hand, the heat developed in ensilage reduces to some extent its feeding value; and if acetic fermentation should set in—as has been occasionally reported in the history of ensilage—the food is very materially injured.

A certain amount of *sweet* ensilage fed in combination with dry, coarse fodder and grain, may be very beneficial, being in this respect the same as a moderate quantity of roots fed in a ration. But fed in such quantities to entirely supplant other coarse fodders, especially if the stables have no warmth to spare, is in my opinion a very wasteful practice, to say the least of it.

When critically reading the experiments with ensilage, it will be found that frequently an average crop of hay is compared with the greatest amount of ensilage corn that an acre is capable of producing; and it is, therefore, the difference between the feeding value of such an acre of corn and hay that such experiments pass off as the difference between dry fodder and ensilage. If they want to find out the true value of ensilage, they should take two parcels of the same weight and of the same kind of fodder in its green state, and preserve the one in the silo and the other in the hay mow, and then accurately notice the results. But, to my knowledge, no such experiments have been conducted by any one of the ensilage advocates.

Thanking you for kindly inserting these remarks, and hoping that they will benefit some of my brother farmers, I am, yours,

ORILLIA.

It is not the best plan to store machines in fields or barnyards.

Fertilizers.

NO. V.

In previous articles we have discussed the principal special fertilizers which supply phosphoric acid to the soil. It being the plant food of which the smallest supply is present, makes it a very necessary subject for study; but as its deficiency does not affect the present generation as much as those who are likely to exist in centuries to come, it does not arouse the interest of the practical man as much as the supply of the nitrogenous fertilizer—one of those essential constituents of plant food which are frequently deficient in the soil—the deficiency of which (although its supply is practically inexhaustible) is a frequent cause of reduced crops.

NITROGENOUS FERTILIZERS.

These fertilizers receive their name from one of the elements which they contain, namely, nitrogen, a gas which constitutes about four-fifths of our atmosphere. But in order to be of any value to growing plants this gas has to be united with either one or both of the elements of water, and thus form either ammonia, nitric acid, saltpetre, nitrates or various other compounds, all spoken of collectively as combined nitrogen. This combining of nitrogen is going on almost continuously by various agents, of which the lightning flashes during a thunder storm is the principal one. But as other agents (chief among which are fire and decay of vegetable matter) are again at work to decompose this combined nitrogen into its elements, the store of this combined nitrogen is not materially changed. It being a very stimulating and expensive fertilizer, it is very desirable to preserve it as much as possible; and as some of them are very volatile, being very easily sent up into the air, and others very soluble, being easily washed into the subsoil (beyond the reach of plants), much skill is required to retain even that portion which is not decomposed.

One of the most fruitful causes of loss of combined nitrogen is the old system of summer fallowing. By its means a larger portion of combined nitrogen is sent into the air, a larger portion decomposed, and a larger portion is washed into the sub-soil than would be the case if the field were covered with a growing crop. No doubt a portion of the nitrogen which is left is transformed into such a condition that it can be taken up more readily by the next crop grown on it, and it is owing to this fact that summer fallowing has gained such a hold. But as almost identically the same beneficial results, and none of the injurious, are obtained with a green crop of clover, there is no reason why the summer fallow should be continued. The killing of weeds was held to be a prominent point in favor of the summer fallow; but, in the first case, weeds should never become troublesome on a well-managed farm; and, secondly, if they exist they can generally be overcome by other means, which have been, and shall again be, described in the *ADVOCATE*. Anything that shades the soil saves the nitrogen of the soil, but the nearer this shading material approaches a luxuriantly-growing crop of clover—which, with its long and searching roots, does not only prevent the nitrogen from sinking into the sub-soil, but also brings up some that has passed the reach of other plants—the better it is. Another great cause of loss of these valuable fertilizers is found in the method in which farmyard manure is frequently handled. By being

exposed to the rain and snow, by overheating, and by long exposure of this manure in the field, an incalculable loss is annually caused, which, with a little care, thought and use of absorbents, viz., land plaster used on the manure heaps, could be easily saved.

Nitrogen, as stated above, is a stimulating fertilizer, but its stimulating effect is more noticeable by an increased growth of hay, straw, &c., than in an increased grain yield, although on lands that are very poor in this plant food the difference in the effect on the grain and straw is not so much noticed.

Although most soils suffer from a deficiency of this fertilizer, it is possible to have too much of it in the soil. All of our readers will have seen spots which were too rich; well, this richness is due to the superabundance of nitrogen. It is very easy to determine if a soil requires nitrogen. All soils producing a rank growth of straw, compared with the grain, soils on which the straw is liable to lodge and rust, and soils which have a dark appearance, are all well supplied with this fertilizer, and their faults may generally be corrected by sowing a little bone-meal, or ashes, or both. Lime is also sometimes beneficial.

Mulching Wheat and Clover.

The drought of the past season should make every tiller of the soil very eager to adopt any measures by which its evil effects can be overcome, and thorough drainage, liberal manuring and constant stirring of the surface soil or mulching, are the best means which we as individuals can adopt to accomplish this. No doubt all of us have noticed their beneficial results, but comparatively few of us will even have thought of using a mulch on our fields; however, it has been done, and with very satisfactory results, as the following extract from the *Rural New Yorker*, written by T. B. Ferry, will show:—

I have some land with a north-western exposure which is quite poor, and where wheat is apt to winter-kill. There was about an acre of this kind in a field put into wheat last fall. I happened to think that perhaps a mulch of straw would help it somewhat; so on half of the spot—about half an acre—I spread with great care an ordinary jag of straw. There was probably about half of a big load, or half a ton. I did not dare put it on thickly, since, having no experience in this line, I did not know but it might smother the wheat. The application was made just before winter—about November 15, if I remember correctly. I spent a good deal of time in spreading this straw very evenly.

It was very dry last fall, and the wheat came up and then stood just about still, until winter; but although very little growth was made, I had not put on straw enough to hide it.

In the spring I failed to see that the straw had done much, if any, good; but at harvest time the wheat showed very decidedly where the straw was. The gain in wheat would have paid me well if I had covered all the exposed part of the field. But to me the most wonderful benefit was to the clover. I can hardly believe my eyes now, when I go over there. Clover seed was sown on the field in the spring. Where the straw had been put, almost to an inch, there is a grand growth of clover. On the rest of the poor spot it is a very moderate growth. There can be no mistake, as in spreading the straw we were not particular to keep the outside line

straight, and the growth of good clover follows the straw out and in.

I mowed this field recently for the second time, with the machine set high to keep down the weeds and thicken up the clover. There is an under-drained swale and cat swamp in this lot, where the soil is moist and rich. Here there was a great growth of clover; but hardly better than where the straw had been put on that poor field. In all the rest of the field, although much of it is good land, I think there is not a half acre having as heavy a sod as that where the straw lies. When I mowed through this place I could feel the machine hang back, as it does when taxed to its utmost capacity, and a blind man could feel the let-up when I passed out of that spot. If a load of straw to the acre will make the poor spots grow clover, to say nothing of the wheat, equal to the richest portions of my fields, why, I shall certainly use more. I do not understand how this could be; but I give the facts. It certainly was not winter protection that made the clover grow so finely, as it was not sown until spring. To one looking down under the clover and seeing how little straw there is—hardly enough now so he could find it—it does not seem that so little could make any difference one way or the other. I had the great pleasure of a call from the directors of the experimental stations in six States lately. They were shown this mulched spot as one of the most wonderful things I had on the farm. I suppose Prof. Roberts referred to it in his article, when he tells of what he saw in Ohio. Now, I hope these gentlemen will try straw this winter on some of the poor, exposed spots on their grounds, and study into the matter for us farmers. I intend to put considerable on my wheat, as soon as the ground freezes so a team can be taken on without injury to it. I do not know whether it will pay on the best land. I do not know whether the straw will decay so as not to be raked up in the hay the year after next. I wish I did; but I shall put it on exposed and poor spots, any way, and take the chances. The straw will lie so closely on the ground that I think I can get the hay without the straw, even if the straw does not decay, by setting the rake a little high. Where one is growing clover to be plowed under, to bring up poor land, a coat of straw seems to me to be just the best possible thing; for if it is turned under it will insure a heavy stand of clover.

As many as five hundred potato diggers have been patented.

One dollar spent for the FARMER'S ADVOCATE is the best invested money that goes from the farm. We want every one of our present subscribers to act as agent.

Warts on cow's teats can be cured by an ointment made of hog's lard one oz. and sulphur $\frac{1}{2}$ oz.; mix well, and apply thoroughly once each day.

The following, it is said, is an admirable cure for damp cellar walls:—Boil two ounces of grease with two quarts of tar for nearly twenty minutes in an iron vessel having pounded glass one pound, and slacked lime two pounds, well dried in an iron pot and sifted through a flour sieve. Add some of the lime to the tar and glass to form a thin paste, only sufficient to cover a square foot at a time about an eighth of an inch thick.

The Dairy.

The Milch Cow Test at the Bay State Fair.

The following was reported to us by the expert who superintended the contest:—

The competition for the best milch cow promised to be of more than common interest, but on Saturday evening, when the time arrived for stripping the cows preparatory to the two milkings of Sunday, from which the tests for milk and butter were to be taken, 11 out of the 17 entered were withdrawn. The milk from the six cows was sampled morning and evening for analysis, and the whole of the milk of the Jersey cow and the two Holsteins was separated twice to exhaust the butter fat. The morning and evening's cream obtained from each cow's milk were mixed and ripened at 68° until 2 o'clock on Monday. The creams were churned with a weak brine at a temperature of 62° and the following

BUTTERS WERE OBTAINED.		
	Gross.	Net Fat.
Queen of the Hill, Holstein.....	25 oz.	17.90 oz.
Della Car, Jersey.....	21.5 oz.	17.50 oz.
Mink, Holstein.....	14.5 oz.	11.22 oz.

CHEMICAL ANALYSIS OF BUTTER.			
	1st Holstein.	Jersey.	Holstein.
Water.....	26.67	18.63	20.59
Butter Fat.....	71.60	80.05	77.37
Caseine.....	1.30	1.40	1.40
Salt.....	.43	1.32	.44
	100.00	100.00	100.00

It will appear from the above showing that the Holstein milk has a low churnability. Its fat globules are exceedingly small and are easily entangled with the caseine, or buttermilk, hence the higher percentage of water contained in the Holstein butter.

As the quantity of butter churned out was a smaller proportion of the milk than the yield shown by the analysis of the milk, it was thought fairer to base the awards on the chemical results. The awards are based on the following table, which gives each cow's score in the last column, according to the following

SCALE OF POINTS:	
For each pound of milk solids.....	8 points
For each pound of butter fat.....	30 points
For each twenty days elapsed since calving.....	1 point
For each twenty days of gestation.....	1 point

The sweepstakes for milk fell to W. A. Russell for the Holstein cow Lady Shepherd. The sweepstakes for butter went to the Holstein Queen of the Hills, entered by W. M. Chapin, of Sandisfield, Mass. Had Lady Shepherd been entered in the butter contest she would have carried off the honors of it also.

In future the management of agricultural societies would do well either to create classes according to breed, or still better according to live weight. It is manifestly unfair to place young animals of 800 to 1000 lbs. weight in competition with cows of eight years old and weighing 1400 to 1600 lbs. It would be only just to all animals, irrespective of breed, to make three classes; one for cows not exceeding 900 lbs., another for cows between that weight and 1100 or 1200 lbs., and a third for all animals over that weight. The test should in all cases be based on the value of the milk constituents, as determined by chemical analysis.

If it were thought advisable to attempt a sweepstakes competition, it should be open to breeds on conditions which would enable small cows to compete on equal terms with large ones. For instance, five cows aggregating 4000 lbs. live weight should compete with four cows weighing

4000 to 4200 lbs. In no case should a greater difference than 10 per cent. of carcass weight be allowed.

A test to be of any value as a public guide to the selection of dairy stock should under all circumstances take account of the food consumed. It is worthy of the consideration of the board, and no doubt arrangements will be made in future fairs to determine in this way the food cost of the milk and butter produced.

The general experience of the great majority of breeders and feeders the world over goes to prove that more profit is made from animals below, rather than above, 1000 lbs. The food of support is a serious life tax which all dairymen must consider. Only two of the cows produced milk equal to the legal standard called for by the Bay State. If the milk of the large cows was so poor that none stood higher than 12 per cent. of total solids, it is clearly illegal to sell milk of that quality. The dairy farmer who keeps cows for the creamery will naturally ask himself whether he wishes to keep 1500 lbs. of live weight to produce a fraction more butter than a cow weighing 800 lbs.

The whole subject of breeding, selection and feeding is involved, and farmers are forced to decide on which line they will cast their lot. The cow best adapted to hills is a small animal, such as have succeeded in the dairy business on the Scotch and Irish hills, and the rocks of the Channel Islands. The animal should be of moderate size, and less, rather than more, than one thousand pounds live weight.

The Danish System.

Mr. J. H. Webb, an English authority, says:—"Twenty years ago Danish butter was the worst in the market; now it is perhaps the best, and certainly the best butter for keeping. It is important to notice that this change has been brought about by the application of scientific principles to their manufacture and the institution of efficient dairy schools throughout the country, which are supported by government. The essential difference in the manufacture of French butter and Danish butter results from the fact, that French butter is eaten almost directly, and is not made to keep any great length of time; whereas Danish butter is essentially keeping butter. In Denmark the dairy farms are much larger than in Normandy, keeping from 50 to 300 cows. The cream is separated from the fresh milk by a separator, and then set to ripen till the next day. It is necessary that the cream should be ripe or acid, not only for the development of flavor, but to obtain a larger percentage of butter. In churning, the machine generally used is that known as a Holstein churn. The process is essentially the same as for making fresh butter, up to the point when butter first begins to come. Then, instead of washing the buttermilk out of the butter, no water is used, but the butter is taken out of the buttermilk while it is in a granular state, and then the butter milk is pressed or squeezed out, generally by hand. Mr. Jenkins, from whom I have derived a great deal of my information on continental dairy farming, has pointed out that the system of making fresh butter is essentially a wet process, while that of keeping butter is essentially a dry one, although the principles of the two processes and the preliminary stages of each are identical. In conclusion, let me say that I think the time is not very far distant when England will be able to produce butter in quality and quantity equal to any other country in Europe."

Milking Stool Reflections.

BY L. F. ABBOTT.

This morning, while milking my grade Jersey—which now scores nearly two pounds of butter daily, since going to pasture—and thinking over the possibilities in the matter of breeding open to farmers, it occurred to me that a few thoughts and suggestions placed before dairymen might not only stimulate but open up some views of the questions, which, possibly some at least, have not seen before; and thereby be persuaded to turn over a new leaf in regard to breeding and feeding of the dairy stock.

I well remember the time when a herd of dairy cows kept on my father's farm, numbering from six to ten animals, were thought to do well if they averaged six pounds of butter a week through the month of June. A pound-of-butter-a-day cow was considered an extra dairy animal. Now a descendant of the same stock, the one spoken of above, will yield the present month 12 to 14 pounds of butter a week. Her daughter, two years old in March, when two months in milk, made something over a pound of butter a day on grass, and bids fair to outstrip her mother when arriving at maturity. It is folly to ask the question, whether it is cheaper and a more rational course to pursue to keep one cow producing 12 pounds of butter a week, than to keep two animals to attain the same result. Yet thousands of farmers are doing just that thing—throwing away nearly one-half their feed and devoting labor and care for which they get no returns.

It is useless to talk of a general purpose cow when we are breeding to attain such results. Such combination does not exist, for when the practical test comes for an animal to prove herself a good dairy or beef beast at the same time, that is to say, filling those distinctive requirements to an eminent degree, she will be found to lack in one or the other.

The question of grade or thoroughbred stock for the dairy seems to confront some of our farmers as a difficulty which they are prone to let trouble them. To me the way seems plain, and the difficulty, if one it is, is to be solved by the pocket-book. For profit, the high grade dairy cow, such as lies in the power of every farmer to possess by patience and care in breeding for himself, by patronizing the best sire within his reach, crossing with a bull of a good milking strain of Jerseys, Ayrshire or Guerneys, upon the best of the dairy stock he possesses, and following in that line from generation to generation, the produce will fall but little, if any, below the thoroughbred—the milk pail and churn being the test.

The prosperity of the farmer of the future must depend largely upon a rational system of husbandry. The consumption of the forage of the farm by good stock, turning the crops grown into fertilizing material, and at the same time reaping a profit in growth of stock, as well as in dairy products, is the basis of good farming. While this is an age of commercial fertilizer, the fact still stands approved, that the manure of animals is unequalled as a means of fertilizing and improving the soil. The dairy farmer finds advantages above those enjoyed by feeding beef breeds—his returns are sooner realized and more constant. This is the case whether the farmer sells milk or patronizes a creamery or cheese factory. But it makes quite a difference to the farm which of these courses he pursues.

The farmer who manufactures his milk into

butter, either by private enterprise or on the co-operative factory system, will show a better footing as a result of the business after a term of a dozen years, if his management has been fairly good, than he would or could by disposing of the whole, as in supplying customers or in corporation cheese making. He may add a few dollars to his bank account by the latter method, but it will be at the expense of his farm, a loss hard to rectify or repair.

This matter of keeping better cows is one I have urged on farmers whenever opportunity offered itself to me. It pains me to see a farmer milking and feeding two cows to get the returns which one ought to give. This is a mighty big thing when considered from a national standpoint.

Creaming Butter from Ensilage.

Mr. L. T. Hazen, the ex-president of the New England Creameries Association, gives his experience with ensilage under the same climatic conditions as we have in Canada, in the Ottawa and Brookville districts. Coming from such a source, it is worth looking at.

My home is in the White Mountain country, a section of almost perpetual frosts. We have frosts in the spring till June usually, and as early as Sept. 1, or nearly that, in the fall, therefore we cannot depend upon quite three months of good corn weather; and while for several years I was a firm believer in ensilage in sections adapted to raising corn, I did not believe it to be applicable to my section. But finally seeing others so rapidly outstripping me in cost of production of their butter, I mustered up courage to try it in a small way, and planted fifteen acres, which proved so well, that I planted twenty-two acres the next year, and the next year fifty, and last year I planted sixty-four, from forty-four of which I put in 889 tons of ensilage.

The balance I fed green till frost, then cut, stooked and dried, cutting as I wanted it to feed. You will see by this that I got from this sixty-four acres feeding value equal to fully 400 tons of hay.

Among the advantages of ensilage are the immense crops raised, enabling one to keep much more stock than he otherwise could, and as he continues, the extra amount of manure obtained will enable him to raise more and more each year, increasing the fertility of his farm from year to year, till, as I have looked forward and asked myself, what can be the limit of production continued in this way? and I have had to exclaim, there is no limit,—when we realize that a man in Massachusetts is keeping thirty-five cows on less than seven acres, buying only the grain. By the comparison, we can form some idea of what we can do if we will go and do likewise. After hearing what this man was doing, I took my pencil and figured what, under the circumstances, I could do on an island of 105 acres. I have found I could keep through the year 525 cows.

I have made several experiments in feeding, and have found that my herd of Jerseys with the grain feed I gave them, will eat on an average nineteen pounds of hay or fifty of ensilage, and with the ensilage feed my butter yield will be about twelve per cent. more than on hay feed with the same amount of grain. One year, when I had not ensilage enough, I found when it was gone—so that I had to feed dry hay—that I had to add one quart of mixed corn and oats to hold my butter up to where it was on one-half ensilage feed.

Some may and do say that as good butter can not be made from ensilage as from hay. That

may be truth in part, and may not be true. There is no doubt that good clover hay cut in first blow, well dried without rain, will make better butter than ensilage or any other feed, except green grass; but we cannot have all good clover, and do not have half what we might have or what it would be for our interest to have; and I am fully satisfied that we can make better butter, and more of it, with ensilage than we can with the average hay of New Hampshire.

But I have seen ensilage from which good butter could not be made. We have one silo in our town, the corn for which was planted thick, cut quite green, and put in the silo whole, which smells so badly that the neighbors living within a radius of fifty to one hundred rods are talking of complaining of the owner as having a nuisance. But this is unnecessary. With all the light that has been given us upon the subject, it is one's own fault if he does not have good ensilage.

I have one silo that holds about 900 tons; it is divided into six pits. I, this year, in filling, cut into two of them about one fourth of dry oat straw, thinking it possible that it might soak up and absorb the juice that pressed out of the corn and make it as valuable as the corn itself. I had two more that held 175 tons each, or 350 tons.

I thought I would fill these with whole corn, and went at it, expecting that from the testimony of some who had used whole ensilage I should have something extra, but it was a series of disappointments from the day we began to fill till it was emptied. First, it took one more man each day to put in forty tons than it did fifty when we cut it, and instead of 350 tons in the two silos, we only got in about 200; but I kept up good courage in anticipation of the splendid feed to come, and my courage kept good until we opened them; then we found a mess of it.

I don't know what to call it; it did not smell sour, neither did it smell good. I fed it to the cattle and they seemed to like it, but I saw it affected the milk, cream and butter. I stopped feeding it to my cows in milk, and fed to my young stock and dry cows without any serious results, and opened one of my cut silos and found it sweet and good. I had in feeding the ensilage from the whole corn an additional expense of about thirty days' work cutting it as I fed. All of these experiences satisfied me that while a rich man might feed whole ensilage, I could not afford it.

Ensilage as a feed for store stock is very good. It will grow young stock fully as fast as grass, and while it may be fed as a whole feed, I think it is better to use other feed with it. I like roast turkey; I can also eat my portion from a dish of beans; though to put me on a straight diet of any of the luxuries of life for six months, I think I should get sick of them; but to have one at one meal and another at the next, I get along very well.

It is the same with stock. They like a change, and while I believe that cows will give more milk, and make more butter on all ensilage than on part hay, I think it better for the stock to eat part hay, except in particular cases. I have for four years put in about forty farrow cows, which I have fed nothing but corn meal and ensilage; have milked them till fat, and then, as we wanted them to eat, have killed them. Such beef is not often seen in winter. It will invariably be very tender and juicy. Our cooks in the woods have repeatedly spoken of the remarkably tender, rich, and juicy nature of all of the beef that went to the camp from here.

Dairy Influence in Agriculture.

(Continued from page 307.)

Most rotations are governed with strict reference to the proportion of land which may be left in grass, and the proportion allowed to other crops is in all economical systems of practice so divided up as to ensure a thorough cultivation of the soil and its complete clothing as soon as convenient, and with the shortest possible interval between harvest and seeding; and such a succession of plants as require nitrogenous and inorganic, or mineral food, in varying proportions and different amounts. In the Scotch system we have the five-course; in the English, a combination of the Norfolk, or four-course and the five; while in Ireland, the eight course rotation, which retains three-eighths under grass, is largely practised. As long as the farmer retains his present ideas of artificial food and chemical fertilizers, this course would appear to promise the best results for Canadian practice.

As we cannot hope for a very early and rapid change of mind among our farmers on the subject of specific feeding of farm crops, we may perhaps be influenced by a greater diversity of crops, which will to some extent modify the evil of slowly exhausting the soil. From New England to Dakota, from Virginia to Kansas, you may find fodder corn or corn ensilage. There are as many varieties of ensilage or of other crops as there are of farms and farmers. Perhaps no other crop grown for stock food has received as much attention from farmers and college men during the last three years as corn for fodder and ensilage. Less than two years ago the press and platform advocates of ensilage in Canada could be counted on the fingers of one hand. Those who were not opponents were coldly neutral; but some of these are to-day enthusiastic in their advocacy. Men ask, what can we get in corn that we cannot in roots, and why abandon roots? This begs the question. Ensilage should be regarded as an auxiliary crop, and only as a partial substitute for hay, clover and roots. Generally it gives double the dry matter of roots per acre, and four times as much dry matter as hay; nothing resists drought like it, and if allowed a good start, a judicious use of specific food to the value of \$4 to \$5 per acre, according to the judgment of the grower, it will get such a lift through infancy as to make a vigorous growth by the middle of July. Like most other plants, we have only about one hundred days for this; but if it attains at maturity ten or thirteen feet it will prove just the thing for those parts of our country denuded of wood and having light rain-falls.

Blodgett, in his "Climatology," states, economists and travellers, all bear testimony to the influence of the corn crop on the climate in the States west of the Mississippi. Like the planting of young forests, it has had its share in restraining the withering effects of the sun on the plains, and has, without doubt, increased the rainfall more than any other crop. Briefly stated, it may be said to produce a tonnage of food equal to roots, but it must be remembered that while roots have from twelve to fifteen per cent. of solids, or dry matter, corn, if allowed to stand till the kernels begin to glaze, holds from twenty-four to thirty per cent. of dry matter. This is the time to cut, to secure the greatest weight and largest amount of nutritive matter. The cost of cultivation per acre is slightly less. We cannot on this account afford to dispense with roots,

inasmuch as, after having provided our nutritive ratio, we should vary flavor by feeding many substances rather than few, to secure the best results in animal digestion. The varying power of digestion in different animals is only beginning to be understood; we know but little about it yet. Men crave for carrots, cauliflowers, savoys, tomatoes, parsnips, celery, and other nice flavored succulents in winter, rather than content ourselves with potatoes only. This means enjoyment, vigorous digestion, and higher nutrition, and therefore less doctors' and drug bills. May we not reason by analogy, from these facts, that what holds good in principle in animal digestion, assimilation and absorption, may in a more limited sense be true of plants? Health implies good feeding; feeding implies nutrition from beginning to end. If we give up thinking that we know everything, and learn to be more respectful, we may hope to learn and solve the problems that confront us. It is a grand beginning to have faith; this will lead to work, and no labor is spent in vain. Occasional visits to the United States have convinced me that the bias they entertain for farm stock, grain, and even mutton produced in Canada, opens up to us a promise of great value. It is a great physical truth that plants and animals bred and cultivated near the northern limits of production excel in constitutional vigor. Lord Dufferin's refined taste preferred the butter produced from grasses on the shores of Lake St. John, Chicoutimi County, Quebec. The oats of far northern counties exhibited last year were said to scale fifty-four pounds to the bushel. Manitoba grass and wheat and the products of Northern Ontario and the Ottawa Valley point in a like direction. Let us learn to study our climate, and believe that Canada has an agricultural future second to none in the English-speaking world.

Instruction in Dairying.

Professor Carroll in a recent paper said:—"I would strongly urge the desirability of obtaining an instructor who should go about to farmers' places, where classes might be held. The practice of butter-making could soon be learned. Cheese-making would, of course, take a much longer time in teaching. Also, that farmers should gradually set about the system of winter dairying; and, again, that butter markets should be established at convenient stations, where butter would be sold to merchants who would make it up for the markets on the Normandy system (which was given in the April No. of FARMER'S ADVOCATE). This would do much for the dairy farmer. In the winter 1886-7, I saw butter sold in a market in Normandy at 1s. 8d. per lb. I visited an establishment there where over five million pounds of butter per annum were being made up. The Danish proprietor generally farms largely. He buys the milk from his tenants, sending a conveyance around morning and evening to collect it. I found the price averages about 4d. per gallon. Large numbers of pigs are fed upon the separated milk; sometimes skim milk cheese is made. Machinery for dairy work is almost universal. Butter is made with the greatest care, and the packing is done very neatly. In Sweden, milk is sent long distances by rail. At Stockholm, a company deals with the milk of 4,000 or 5,000 cows. The cows are fed principally upon hay with small quantities of mangels and cake, sun-flower seed cake being much approved. The cows are kept entirely indoors in winter, and in summer the system of 'tethering' is practised. Rotation cropping is generally practised, and the Danes are very particular in seeding their land with the best rye grass seed and clover."

Organization in Dairying.

BY JAMES CHEESMAN, BOSTON.

There are some sharp lines of difference between dairy conditions here as compared with yours. You rely mainly on the export market, which gives you but a moderate average of 22 cents for the season. Here, we have a population in the six New England States of five millions; and the great majority of the people are engaged in manufactures which provide a home market for all the creamery product that can be made, at good prices. Here, butter is packed in soft-wood tubs of ten to thirty pounds weight in five and ten pound boxes, and very much in pound prints. The status of creamery-made goods is always on the increase. Although, there is a demand for every description of butter, including the Western "hash or ladle packed;" the strongest demand is for choice creamery goods, of which there is never a glut. Last year, according to the Boston Produce Exchange, about 36,000,000 lbs. of butter were consumed in that city, or more than the entire make of farm and creamery goods produced in Ontario. There is a wide variation in price in creamery goods, as in well-made farm butters. I know a few creameries that never sell for less than 30c., and one New England creamery has sold butter this season in New York city, for 50c. At the Bay State Fair last week, the first premium was awarded to a creamery making 30c. butter; the first premium for prints was taken by a Guernsey breeder, Mr. E. F. Bowditch, whose print butter sells on the open market the year round for 80c. per pound. When my cow test work was over, I felt curious to examine some of this highly reputed butter, which I had the opportunity of tasting at the owner's tea table last August. What I specially desired to know was, how he could have such high-flavored and well-worked butter without injuring the grain, and whether these results could be attained, and the freedom from the caseine or curd guaranteed. I give you a copy of my analysis, from which you will see how remarkably dry this butter was, and how highly salted:

CHEMICAL COMPOSITION.

Water	8.80
Butter Fat	88.87
Caseine	.90
Salt	1.43
	100.00

It is the driest butter I ever examined whose grain was uninjured; the flavor was rich, full and nutty, and the salting without a trace of undissolved salt.

Whatever advantages come to a creamery or a farm butter-maker, must come as a result of organization. Men and public bodies do not achieve distinction or success by accident, it comes to the deserving when they have the business capacity to win. Organization implies intelligent purpose and work all along the line of dairy labor, from the food of the cow to the care of the milk and cream, and its ultimate conversion into butter of uniform quality.

Balance of 1888 given to all new subscribers.

The stockman who extends the circulation of the ADVOCATE, benefits his own business. Induce all American buyers and acquaintances to subscribe. We will repay you for all efforts.

Hoard's Dairyman claims that the best method to prevent cows from kicking is to draw the cow's head up high, so as to cause a down arching of the spine at the loins. Several who have tried it report favorably upon it.

Garden and Orchard.**The Wonderful Peach.**

A new variety of peach, which originated in New Jersey, is described in the *Orchard and Garden*. It is a large, yellow-fleshed, freestone variety, ripening in New Jersey the second week in October, its late ripening making it particularly valuable. It is claimed to be an annual bearer. It is called "Wonderful," and is regarded as a boon to the fruit growers.

Are Sprayed Fruits Poisonous?

In our rambles among numerous fruit gardens, we have again seen great injury done by the codling-moth; in fact in some of them fully one-half of the fruit had been injured by this insect. Although the majority of the owners of such gardens seemed to know about the benefits of spraying with Paris green at the time the fruit is about the size of a marble, yet they were afraid to apply it, fearing that the poison, which killed the grub, might also kill the person consuming the ripe fruit. This fear is, however, ungrounded, as the poisons will be found in the tree long before the apple ripens.

The following extract from the Michigan Agricultural College Speculum will add force to the above statement, and will, we hope, convince even the most cautious or skeptical person on this point:—

The antipathy of many farmers and fruit growers to the use of poisons for preventing the ravages of insects amounts almost to a prejudice. Though spraying has been practised for years with beneficial results, objections are still made that it is unsafe, and that it is injurious to trees and fruit. If trees are sprayed too often during the same season, not at the right time, or with too strong a solution, the foliage and fruit may be injured; but even in these cases the ripened fruit may be eaten with impunity, so far as danger from poison is concerned. The insecticides most commonly used in spraying fruit trees are Paris green and London purple, the poison in both of which is the pentoxide of arsenic (As₂O₃).

Analysis of both fruit and leaves of apple trees were made about five weeks after spraying. The trees had been sprayed from one to three times with London purple solution; strength, one pound to 100 gallons of water. The average single application per tree was 1½ gallons, containing 10,500 grains of the poison. Assuming the number of leaves of the average apple tree to be 125,000 (a low estimate), then each leaf would receive .084 grain, and if all remained, 50 leaves, the average number taken for analysis, would contain 4.2 grains, or with three applications 12.6 grains. Repeated trials with Marsh's Test, which will easily detect 1-5000 of a grain revealed not the slightest trace of arsenic.

A late bulletin from the Ohio Experiment Station contains the result of an experiment in spraying cherry trees. The solution, ½ lb. London purple to 50 gallons of water, was applied three and four times. Analysis of two quarts of ripe cherries from these trees showed no trace of arsenic.

As soon as the leaves fall from grape vines they may be trimmed. The trimming may be done at any time afterwards until the sap flows next spring.

Poultry.**Poultry at the Western Fair.**

The exhibit in this department was not so large as we have seen at this Fair, but the quality was above that of any previous show in London, except the poultry show of last January. Dorkings were very fine. Polands, fine, but some of the classes not large in numbers. Plymouth Rocks, one or two fine pair, but, on the whole, only fair. This breed seems on the wane since the advent of white Plymouth Rocks. Dark Brahmans were few in number. In old birds the cocks were only passable, but the hens very fine. Light Brahmans, fair to medium. Cochins, in the various classes, good. The young white birds were very young and small, but promise well. Partridge, old birds very fine; young, only fair. Buffs, good—old and young. Black, the same. Houdans, very fine. This most useful variety seems to be even less popular than in previous years. This is decidedly unfortunate as they are a very useful bird, and as a barnyard fowl are unsurpassed by very few breeds. Langshans, as usual, in large numbers and good quality. Laced Wyandottes, young, were shown in large numbers, some very fine, and vice versa; old birds decidedly inferior. This valuable breed seems to baffle the fancier more than any other, the beautiful wing being hard to obtain with uniformity. The bird that has breast pencilling correct is almost sure to be too dark on the back and saddle; and many fine pullets when they mature make inferior hens, usually getting lighter on the breast and darker on the saddle. Some fine white Wyandottes were shown, and, as they are essentially the same bird except color, they will doubtless to a very great extent supersede the Laced variety. Those who fancy a white variety, cannot fail to admire these beautiful birds. The first pair of Golden Wyandottes ever exhibited in London were shown here. These, it must not be supposed, came from the Silver Laced variety, as they are of a different make-up and not in any way connected with them, deriving their name from the fact that the feathers are, or at least should be, livid, same as the original Wyandotte, except the centres are a golden bay instead of white. Whether they will be of any value as a breed remains to be demonstrated, as they are scarcely before the public as yet, although admitted to the standard of excellence—or as it will in future be called, the "standard of perfection" at the revision last winter.

White Plymouth Rocks are a new variety, and, like the white Wyandottes are likely to supersede their parents, being equally as profitable, and being a solid color are much easier bred—true to feather.

Games were shown in large numbers, as usual some very fine ones in most of the various classes. White and brown Leghorns in fair numbers and of very good quality. Old Spanish in bad shape, but some fair birds; young birds very nice. Black Minorcas magnificent, although the best cock was in very bad feather, but was of grand form and station also, but hen magnificent. This pair were two of a trio, costing in England one hundred dollars, with an additional twenty dollars for transportation here. Hamburgs good in all classes. The Bantam was well represented. Turkeys, ducks and geese were also well represented, the prizes going to very fair birds in almost every instance.

The poultry building is a credit to the city, and is said to be the best building on the continent,—built exclusively for poultry, certainly it is the best in Canada. But as the days go by and our people awaken (as they are beginning to do) to the importance of the poultry industry, we hope to see more good buildings for this purpose, and not, as is very often the case at present, the fowls given the poorest building on the ground—in some instances these are called main buildings, though good for no other purpose, and unfit for poultry.

FIRST PRIZE ESSAY.**The Most Economical and Profitable Management of Fowls.**

BY J. W. BARTLETT.

To attain the best results with fowls, we must have, first, a good house; second, a breed suited to our requirements; and third, must feed properly and give the requisite care. Accordingly, we will first consider

THE HOUSE.

The chief requirements are warmth, a floor as nearly dry at all times as possible, and proper ventilation. The amount of room necessary for fowls in confinement is four square feet per head. This is sufficient for all sizes of fowls, as the smaller ones are so much more active, they require as much room as the larger varieties. A board floor is preferable at all times, being dry and easily cleaned, and not liable to become tainted or foul. If concrete floors are used they should be covered two inches deep with dry muck or chaff, or some other substance that will absorb the moisture. This should be removed and replaced as often as it gets foul or damp, which will be longer or shorter according to the number of birds in a given area of floor. The perches should not be above twenty to twenty-four inches from the ground or floor, or better still, place a board twenty inches in width along the wall, and have the perches nailed on four inch pieces, and laid on it loose, so they can be moved when cleaning the board or shelf. To facilitate cleaning, the shelf should be copiously sprinkled with dry muck, road dust or some other absorbent. Where fowls are confined in the house continuously, this shelf will catch two-thirds of the droppings, as the birds occupy the perch much of the daytime, besides the night.

THE BREED

must be selected to suit the requirements of the breeder or poulterer. In the case of the average farmer, it is not well to select especially for eggs or table fowl, but a combination of both. Just here we would call attention to a fact not generally known, or at least not published, viz., that the non-setting varieties lay white eggs, and setting varieties brown. In the best markets brown eggs are preferred, in some places bringing five to ten cents per dozen more than white ones; on the other hand, in markets where quantity, not quality, wins, some of the white eggs, such as Black Spanish, sell for the most money. It accordingly follows that the breed must be selected according to the market; but, as before stated, a general purpose bird will, in most cases, give the best results.

FEED AND CARE

really amount to more than the breed, as no bird will pay if not well fed and cared for; while almost any breed will yield a fair return if they are. For young chicks there is nothing better

known at present than boiled rice, alternated with dry oatmeal, avoiding soft, sloppy food of all kinds, and feeding small wheat as the chief diet as soon as they are old enough to eat it. A fair allowance of milk, sweet or sour, is desirable after three weeks from the shell, but previous to that, especially in confinement, has a tendency to diarrhoea. Curd made from sour milk is good food for the chicks at any age. As the young birds grow older, say three months old, those intended for the block should be separated if possible from the pullets intended for the laying stock, and fed largely on corn, which will fatten them much more readily than most other grains, but which, with the pullets, is not desirable, as it retards the development of the ovarian organs. On the contrary, they should be fed chiefly on wheat and oats, with a feed of scalded bran in the morning. As winter comes on it is best to keep all in the house, if sufficient room is available; if not, they must have the run of a shed or some other place where they will not have wet, cold feet. In winter, laying hens should be fed scalded bran in the morning and whole grain later on in the day. The latter should not be thrown to them, as is so frequently done, but scattered in short straw or chaff from six inches to a foot in depth. This gives them exercise which is almost indispensable to health and productiveness. Two laying seasons should be the life of fowls; while they may lay fairly the third, they will not equal the first or second, nor even approach it, and at the end of the second laying season they will be in very good shape for the table, while if kept another season they will be decidedly inferior. In every department the most rigid economy must be practised, and every person of taste will find many things to feed not specified in this short essay, such as cabbage, turnips, scraps of meats, etc., etc., and in all cases feed only what will be consumed, and better not quite enough than too much.

A Step Backward.

At the meeting of the American Poultry Association last winter a motion was passed admitting pit games to the standard, but the good sense of the Association prevailed, and the question was reconsidered and rescinded.

And yet the Directors of the Ontario Poultry Association have seen fit (as will be seen from the minutes of the last meeting) to place pit Games on the prize list of the show to be held the second week in January next. Surely Canadian sentiment has outgrown the barbarous pastime of cock-fighting; and if the Directors are not awake to the fact, it is time for some one to touch them with a sharp stick. Standard games are a majestic bird, graceful and handsome, being bred for color, size and utility, and are entitled to rank high as to economic value; but the pit bird, bred for the purpose of fighting, and fighting only, or at least that is the *ne plus ultra* of the breeders' aim—any other merit being secondary—and dollars in economic merit would be sacrificed for cents, in fighting powers. It is to be hoped that the next Board of Directors will be men of sufficient stamina and pride to reconsider this step and undo it.

Tarred paper is excellent for covering the inside of buildings. There is no doubt but it prevents the accumulation of lice and parasites within the house, besides the smell is healthful and counteracts bad odors.

The Advantages Possessed by the Farmer to Raise Poultry.

BY C. G. PETER.

I firmly believe that the farmer is pre-eminently the man, and the farm just the spot of all others, for successful and remunerative poultry raising. In conversation with a farmer at a late exhibition I expressed this opinion, as I often have before, and he remarked: "It may pay you; but my fowls do not pay me." "Are they thoroughbred?" I asked. "No!" he replied, emphatically; "you don't catch me wasting my time feeding a lot of fowls." And, strange as it may appear, I often get a reply similar to the above. And this false idea, that good stock needs very different every-day care and food from common fowls is so prevalent, that I will just say a few words about it. Let us take the above man's objection: "Wasting time feeding a lot of fowls." Are we to suppose that he did not feed those he had? At all events, they must procure enough food or die; and what will sustain life in a mongrel will do the same office for pure stock. And if it should ever be that farmers in Canada will investigate the matter without prejudice, they will find in thoroughbred poultry a source of wealth that has been too much neglected, and, I might say, despised. In the first place, there is nothing on the farm which will give so quick returns as poultry; and any man of any business intelligence whatever looks out for "quick returns" as one of the great avenues of profit. Then there is little or no risk of any appreciable value. Besides this, the waste of the farm and the insects they destroy, will keep a large flock, which will only need feeding during the severe months of winter. The food they search and consume is not useful for any other purpose, and the destruction of insects is a help which cannot be estimated. As I have referred to thoroughbred stock as being preferable, I will state the reasons:—

1. The different breeds are strong in one or more points which tend to profit; they are extra egg producers; or large-bodied for table purposes, and quick to form flesh and reach the killing stage; some are active and fly high, others could not fly over a three-foot fence, and are quiet, &c.

2. By having a certain breed and keeping them pure, one is certain of what he is doing. He knows what to expect of every bird he has. There is no "guessing" about it. Besides, the flock being uniform in appearance, tends to a beauty which is sure to please the eye of the most careless beholder. It is surprising that such an intelligent, careful, thrifty people as farmers are, will not look into this question, or that such a source of income has been at their hands unnoticed, or nearly so. There are many who think that the beautiful specimens seen at our exhibitions could not be bred and raised by any but a fancier, who is thought to have some peculiar knack of manufacturing prize birds, and who has, it is supposed, superior and curiously-constructed habitations for them. To judge by the remarks made, such as: "The expense you fanciers go to;" or, "If I had a place like you;" or, "If I could breed such birds as those, I would have thoroughbreds," &c. But the fact is, that the fancier in nearly every case has not a quarter the chance to raise superior stock that the farmer has; for the advantages of the latter, which he enjoys by the very nature of his sur-

roundings, viz., having an unlimited range for his birds, a great variety of food for them, and an opportunity of being often (at least daily) among his birds, are only attainable to most fanciers through unceasing thought and care, to imitate those gifts of nature possessed by the farmer.

In this letter I have endeavored to create some interest for pure-bred birds. In my next contribution I shall take up their feeding.

Another.

Still another new breed. This time, however, not from American brains, but of English origin. They are called Orpingtons, and described as large, black, meaty birds, and prolific layers, being made up of a combination of Plymouth Rock, Minorca and Langshan blood. We shall watch this new acquisition with interest. They have not yet reached this continent; but, doubtless, some of the English firms that have been exporting so largely during the last three seasons will call the attention of Canadian fanciers to these in the near future.

Poultry Association of Ontario.

Following are the principal changes made in the prize list and other business done so far as it would interest our readers. In view of the application to place Black and Golden Wyandottes on the list, it will in future read Laced Wyandottes and Wyandottes any other variety. (This is fair, as it will place the laced varieties in one class and the solid varieties in another.) Javas was changed to Black Javas; any other variety Bantams changed to Polish Bantams; Lafeiche and Crevecours cut off, and a class for any other French variety substituted (a wise course). A class was added for pet game. The date of exhibition was fixed for the second week in January (at St. Catharines), and the annual meeting for Thursday of the show week. Following are the judges and their respective varieties:—Asiatics, Games, Hamburgs, all varieties of Bantams and Ducks—Sharp Butterfield, Sandwich, Leghorns, Dorkings, Polands, Houdans, Wyandottes, Turkeys, Geese—L. C. Jarvis, Port Stanley. Langshans, Javas, Spanish, Plymouth Rocks, Minorcas, Andalusians, and other variety French and any other variety fowls—T. H. Smelt, Guelph. Pigeons, rabbits and pets—Ham. Cooper, Hamilton.

Small eggs from hens indicate a diseased state of the ovaries, the oviduct alone discharging its functions.

By keeping your poultry yard tidy, it will go a great way toward making sales and increasing the reputation of the breeder.

The spring time is the season of development, and the chicken that commences its development with nature, makes the most perfect one, both physically and as a breeder.

H. Ehey writes in the Ohio Farmer:—On March 8, 1888, I penned up fifteen hens of last year's hatch. Seven Wyandotte hens laid 828 eggs in 184 days; seven Leghorns laid 796 eggs, and one Langshan laid 124 eggs in the same time. The hens were all confined 184 days and all fared alike. This is an exact statement.

It is somewhat strange that an old breed like the Dorking, the pride of the English cottager and farmer, should suffer from unfavorable impressions regarding their adaptation to our climate. They are a good sized fowl, fair layers and superior in flesh qualities, and are fairly hardy. We consider them among the best, if not the best, fowl for Canadian farmers.

Veterinary.

Tuberculosis in Cattle.

BY C. H. SWEETAPPLE, V. S.

Since my recent article in the *ADVOCATE* on this subject, I have had numerous conversations and enquiries from prominent agriculturists and others relating to tuberculosis, its contagious character, and the danger that may be incurred by the milk or meat of cattle affected with the disease being used as food by the human race. This must be my excuse for again recurring to it.

It is now quite generally recognized by scientific men that tuberculosis is a disease that is capable of being transmitted from the lower animals to man, and vice versa, from man to the lower animals. Its prevalence in cattle is well known. At a recent meeting of the British Medical Association, one medical gentleman stated, on the authority of a London meat inspector, that eighty per cent. of all the meat sold in the London market had traces of tubercular taint; others claimed fifty per cent., and some put it as low as twenty-five per cent. This is certainly an alarming state of affairs. The prospect of even one-fourth of the cattle of the country being affected with tuberculosis, and their meat and milk unfit for human food, is almost appalling. It may dissipate some alarm if I give here some extracts from Prof. Williams' admirable work on Veterinary Medicine. In describing "caseous and calcareous tumors non-recognizable prior to death," he says:—"These masses called 'angle berries,' or 'grapes,' by butchers, vary in size from that of a small pea to a hen's egg, or larger. They are often confluent, and one apparent mass sometimes weighs many pounds." After describing their microscopic appearances, he says:—"The flesh of such animals is very often of a fair or even superior description, and the only question of importance is, whether the flesh is fit for human food. This question is asked because very often such flesh is condemned by market inspectors. If, however, we can only train our minds to consider that these masses are mere growths—that in fact they are no more injurious to the quality of the flesh than warts or other excrescences on the skin, the feeling of fear may be overcome. I am of opinion that these excrescences are mere results of a previous and perhaps distant inflammation; that the products of such inflammation are thus localized, whereby they are prevented from injuring the general economy; that, in fact, they are as much external to the general economy of the animal as so many excrescences in the skin, or tumors in any part of the body, and that if they are carefully removed, and the membranes and structures in which they are embedded, and from which they grow, carefully dissected out, the flesh is perfectly good, fit for any man's table, and that it is a pity to destroy valuable and nutritious human food because the term tuberculosis has been applied to the tumors." In our consideration of this view it must, of course, be understood that the animal at the time of slaughter must be, so far as we are able to discover, in a perfect state of health, without febrile symptoms, and all the organs and functions of the body in a perfectly natural and healthy state. Indeed, if there should be a febrile, unhealthy or depraved condition of the system at the time of slaughter, the meat of an animal

could scarcely be in the "prime condition," or of a "superior description," but would be flabby, bad-colored, and show evidences of its unhealthy condition. And can we believe that the meat of an animal suffering from any disease whatever of a febrile character can be a safe article of diet? In fact, I believe that the meat of an animal that is butchered even during its periodical season of "heat" is not as good as at other times.

There cannot be a doubt that, from the numerous experiments, and more especially from the discovery and identification of the "microbe" of tubercle, that tuberculosis is a contagious disease, and that certain animals and in certain different states of the system are more liable to contract the disease—that the meat or milk of animals that may contain the germ or microbe of the disease is not a safe article of diet. Yet it appears evident that the contagious principle, being localized and encysted in these tubercular deposits, in those cases in which the animal appears to be in a perfectly healthy and thriving state, that the "virus" of the disease is not dispersed or disseminated over the system. If it were, an unhealthy condition would be evident. Therefore, in these conditions neither the meat nor the milk would be impregnated with the "virus."

As before remarked, recent experiments and microscopic research have sufficiently proved the contagious nature of the disease, and no one of my own profession who endeavors to keep pace with the advancing knowledge of the day would now express a contrary opinion. Still, there are many influences that may tend to check its dissemination, both among the human and the brute creation. During a practice of almost twenty years in the county of Ontario, much of which time has been amongst some of the most valuable herds of Shorthorns, I have seen and made post-mortem examinations on many cases of tuberculosis. I have seen single cases at different times in several of the well-known herds, in which fresh and imported animals are continually being introduced; but in no instance can I recollect more than a single animal at one time being affected; and in no instance would I, simply from my own experience, suppose that the disease had been communicated from one animal to another. The disease has not appeared to spread, though no special attention to isolation was at one time adopted. Of course, seeing the reports of the prevalence of the disease in Great Britain, and knowing that it also exists in this country, it might be impossible to state positively that no tubercular deposit existed in an animal, and it may exist, as before remarked, but may not be recognizable unless by a post-mortem examination. Also, it may be an easy matter to recognize in an animal that a certain organ or tissue of the animal economy is affected; that the organ is not performing its functions properly; but in many cases he would be a rash practitioner, or a very ignorant one, who would venture to state definitely that tubercular deposit was the cause of the trouble.

A medical gentleman, an M. P., stated in committee during the last session of Parliament, that he believed a great many people die in this country from tuberculosis, and it is not detected; that medical men find great difficulty in detecting tuberculosis during life; that post-mortem examinations reveal tubercular deposits in every organ of the body, and that the medical man has

no means in his power during the life of the patient to know whether or not, as a matter of fact, that tuberculosis exists, unless in the sputa, where it comes from the lungs, and may be discovered by the microscope; and he believed that hundreds of people die in this country from tuberculosis, but that the disease is not actually identified in consequence of not being allowed to hold post-mortem examinations. In this respect the veterinary profession has certainly the advantage of the sister profession, as post-mortem examinations can almost always be made. And in cases of outbreaks of contagious diseases the advantages to be derived from our ability to make post-mortem examinations in all stages of disease, without waiting for the animal to succumb to the disease itself, as animals may be slaughtered in any stage of disease for that purpose. This is of inestimable advantage in prosecuting our knowledge of the true pathology of disease.

It appears to be pretty generally acknowledged that tuberculosis is on the increase in this country, and a committee of the Dominion Parliament has been appointed to investigate the subject. Any measures that can be devised to effectually abate its ravages would certainly be of inestimable benefit to the country at large.

But I fear I am trespassing too much on your space, so may again recur to this subject in a future issue of the *ADVOCATE*.

The Apiary.

That Grant of \$25.00.

We notice in a periodical published on bees, a comment upon our remarks regarding the special grant of \$25.00 offered by the O. B. K. A. It is trying to blind its readers by throwing them on the wrong scent, and talks about the \$35.00 grant to affiliated societies. The two, as it well knows, are very distinct; but its only hope is that its readers are more ignorant than the contributor of the article censuring the association for the grant of government money in Toronto, when the exhibitions in London and other places do not receive like privileges. No, no; we know full well what we are talking about, and so does the one feigning ignorance.

Conventions.

Perhaps there is nothing, aside from periodicals, which so benefits a pursuit as the meeting in convention of those interested in that pursuit. Points which require solution may be discussed, or an idea secured, which leads to an entirely new and valuable train of thought. Amongst bee-keepers these conventions are very general, and the most important of them all is the North-American Bee-Keepers' Association. Their last meeting was held October 3, 4, 5, at Columbus, Ohio. Although the season has been a very poor one for bee-keepers, the attendance was very fair, and embraced four authors of standard works in agriculture. A new departure was made in the way of a programme. There were but few papers; and a programme committee selected topics for discussion for each session, with a leader for the topic. Whilst many and lengthy papers should be avoided, a medium might be advantageous; and short papers, interspersed with lengthy discussions, would bring out and concentrate discussion. Many topics of interest were brought up, and the sessions thoroughly enjoy-

able. Brantford, Canada, was selected for the next place of meeting; and as this is only the second time in twenty years that the society will meet in Canada a very large attendance is expected. Mr. R. F. Holtermann, of that place, is the Secretary.

"The age for bees to go into winter quarters" was taken up. Many had been feeding bees to stimulate them to brood-rearing until the latter part of October, or even November. It was suggested that bees were, perhaps, like people—the little children and the old people suffered most from a severe winter, and probably the young, sensitive, and not yet hardened bees would suffer also—those bees nearly worn out. Instances were given where bees had wintered successfully where none had been bred after the latter part of July, and again, where they had wintered well and the queen had not ceased laying until November 1st. The majority thought they would like the queen to cease laying about September 1st.

In connection with this it would be well to remember that the bees may have a little brood up to a certain date, and yet the majority by far may be very old bees. It is therefore desirable that the queen deposit a large number of eggs, and then cease her labors about that time for the remainder of the season.

"When should bees commence brood-rearing in the spring?" was another topic for discussion. There appears to be a very strong diversity of opinion upon this subject, and so widely different are the opinions that it would be well to conduct some experiments in this direction. Some claimed they did not want bees to commence brood-rearing until within four weeks of the commencement of the clover harvest. A number did not want their bees to rear any brood whilst in their winter quarters, claiming that the bees lost heart and did not advance as rapidly after setting out as those who did not commence until out. On the other hand, some want four or five combs of solid brood in the hive by the time the bees are let out of their winter quarters, about April 10th. It appears that the advocates of the latter system are right, except in exceptional cases; for strong colonies are what we require, and lack of them so often means no honey. Of course, care should be taken that entrances are contracted; warm quilts or cushions are placed above the frames, and the brood prevented from chilling. Whilst brood may be desirable in spring, all appeared to condemn stimulative feeding as tending to make the bees fly out at times when they should remain at home.

In giving the experiences of the season, there were many very discouraging reports, and the season has indeed been a very unremunerative one to bee-keepers. One member suggested that no one should make a special business of bee-keeping unless he had his stock out of debt and had enough to live on for a year ahead, when another jumped up and said that had been his idea last year, but now after two bad years he would say he ought to have enough for two. They are all looking forward to a succession of prosperous years; and one first-class honey year will make up for a succession of bad seasons. It was advised that poultry, fruit or some other pursuit be combined with bee-keeping.

(TO BE CONTINUED.)

Few realize that millions of pounds of honey are wasted because there are not a sufficient number of bees kept to gather it.

The Provincial Exhibition.

During the time of holding the Provincial Exhibition, the public was treated to a good deal of bombast regarding the continuation of the Exhibition. A few thoughtful and vigorous speeches were made, and some earnest work done; but much that was said then, and written since, has been thrust upon the public without that amount of thought or study that should have been given to this subject. Mr. McCrae's speech may be fairly said to represent one line of thought on this subject; Mr. Dryden's article, which will be found on page 331 of this number, represents the other view; Mr. Drury's speech, which we reported, put things in a very clear light. The continuance or discontinuance of this exhibition should be thoroughly discussed. The entire community are interested in the question. The coming year, no doubt, is a critical one in the life of this institution. Farmer's Clubs and Institutes, as well as the press, should very carefully and thoroughly consider this matter, laying aside any personal or political feelings.

Commercial.

FARMERS' ADVOCATE OFFICE,
November 1, 1888.

The month of October has been wet and showery; still, the water that has fallen has been much needed.

WHEAT.

This commodity has had more attention the past month or six weeks than it has seen for many months before; in fact, years have passed since we have seen such permanent changes in the wheat markets of the world. While there is, no doubt, a serious deficiency in the production of wheat in the United States and Canada, there is, no doubt, that both these countries have an abundance for all home requirements, but they have enough and to spare.

In reviewing the wheat trade on Tuesday, Irwin, Green & Co., of Chicago, said:—In the wheat markets of the world prices were never in a more anomalous condition than they are now. New York relatively higher than Liverpool, Chicago away above the point at which it is possible to ship to the seaboard, and Minneapolis higher than this city, form a series of inversion which is so palpably artificial that it cannot be maintained. While it continues exports to Europe from the Atlantic coast of the United States can not be made, except that some four may move on old orders. Meanwhile, the wants of the importing people of the old world are being supplied freely by other countries, and from our Pacific slope. Russia, in particular, is looming up as able to contribute something like 40,000,000 bushels over and above the total of her exports of last year, and the area from which wheat growers in India can help to feed Europe is largely increased by the rise in prices in the United Kingdom. Each week's experience renders it more apparent that the bread eaters on the other side of the Atlantic can supply their wants more cheaply elsewhere, at least till much later in the crop year. The time may come, before another harvest, when they will be compelled to pay what is at present asked by American sellers, but that time is not now.

The *Levant Herald* says that the exports of grain from Odessa during the past year have been 55,800,000 bushels, showing an increase of 19,600,000 bushels over the shipments of the previous year. These total shipments were valued at \$63,750,000. In 1887 the wheat shipments from Odessa amounted to 23,833,333 bushels, showing an excess over the previous year of 9,860,000 bushels. The Odessa wheat exports form 29 per cent. of the whole wheat export of the Russian Empire from all ports. In 1887 England imported 8,400,000 bushels of wheat from Odessa. After England, the chief importers are France, Italy and Turkey. The current season, however, will far exceed any previous records; the grain shipments will, it is stated, be of enormous amount. For November shipments alone upwards of two hundred British vessels are already chartered. The Southwestern Railway Company are bringing down 60 wagons of grain daily, whilst by water from the Dnieper and Danube the daily arrivals aggregate 458,733 bushels, or in all about 600,000 bushels.

While speculation may force the price of wheat still higher, yet the possibilities are that we may see lower prices before very long. While there is evidence of a surplus remaining, it would seem very unreasonable to expect the disparity in values between our markets and those abroad to further widen, except under the influence of temporary overselling by rash speculative operators. Wheat has now reached a price that should satisfy any

reasonable farmer, and much more than the most sanguine expected six months ago. We again repeat what we said last month, viz., that farmers who have wheat to sell should market the same and put the money in circulation.

LIVE STOCK.

The Montreal Gazette reports the market as follows—Oct 30th: Although there has been no material change in the condition of the British live stock trade, a somewhat firmer tone has been manifested, and, if anything, the general situation has made a slight recovery from the recent severe depression, which broke values to such a low point, yet it will be noticed that even that point was considerably above the price in the preceding three years at this period. Receipts have been less heavy but fully equal to requirements, while the weather has been warm for the season. At Liverpool to-day prime Canadian steers were at 11c., good to choice at 10½c., poor to medium at 9½c., and inferior and bulls at 7c. @ 8½c. The sheep trade was fair at steady prices. At Liverpool to-day best sheep were at 13c., secondary grades 11c. @ 12c., merinos 10½c. @ 11½c., and inferior and rams 8c. @ 9½c. The foregoing quotations are calculated on the basis of \$4.80 in the £. Refrigerated beef is cabled as follows: Liverpool, 5½d. for hindquarters, and 3½d. for forequarters per lb.; London—hindquarters 2s. 8d., and forequarters 1s. 6d. per 8 lbs. by the carcass.

CLOVER SEED.

Reports of the clover seed crop of the United States points to a shortage compared with last year. New York State and Pennsylvania are said to have very little seed, not enough for their own requirements. Maryland, Delaware, and Virginia, are short, and the same applies to all the clover-seed-growing states, except Northern Ohio. This state is said to have the best and finest crop of seed of any state in the Union. From these facts it behooves every farmer to take good care of what he has.

APPLES.

The following report of the London, England, apple market, is as follows:—Oct. 20, 1888—Arrivals from Canada for the week are 13,800 barrels. Canadian apples have arrived in very bad condition, owing to the shipments being nearly all soft, early fruit, and consequently prices have been very low, paying from 4s. 3d. @ 10s. per bbl. The low prices realized for Canadian fruit had a depressing influence on the markets and better sorts; but it may be, that these low prices will bring forward an increased demand, and we confidently look forward to better prices next week for good stock.

CHEESE.

The Montreal Gazette reviews the situation very fully, as follows:—Cheese has undergone no substantial change, but the undertone of the market has a firm expression, with holders confident and not exercising any pressure to sell. Statistically the position appears healthy, and there is no serious effort apparent, even on the part of the bears, to make it out otherwise. Advices from points east of Toronto indicate that practically all the September make has been moved or is moving, leaving only the October make in the country, which, as is now generally conceded, is light. The large combinations show a material shrinkage, while in many cases the smaller factories are running far behind last year, so that when navigation closes it looks as if stocks would not be excessive. From this date last year, to the close of navigation, we shipped about 150,000 boxes, and should that quantity go out this season, the stock carried over promises to be in much smaller compass than was the case last year. The exports from New York have continued light, only 6,000 boxes for the week. Exports from New York, from May 1 to October 23, were 55,438,720 pounds, against 60,229,568 in 1887, a decrease of 4,849,848 pounds; while the receipts during the same time decreased 28,200 packages. If we allow 65 pounds to the box for Montreal shipments to October 27, we find a total of 65,234,000 pounds, against 65,733,287 to November 30, 1887, which shows that we have shipped considerably more than New York, but, of course, the States goods will have to be deducted from that total. Last year 4,725,979 pounds States cheese was shipped via Montreal to November 30, and it is not expected that that amount will be exceeded this year. It would appear that the aggregate shipments from New York and Montreal this season will fall below last year unless we ship heavily during the next three weeks. The cable was unchanged, at 5½s. A Liverpool cable, dated yesterday, says: "The cheese market is quiet, with a good demand for finest September, while for colored cheese, at 5½s. to 5½s., the demand is chiefly for consumption. An improvement in the demand is expected soon."

BUTTER.

The country has been well cleaned up of creamery, in fact all the make has been bought up, and 25½c. has been paid for September made butter. The demand seems to have been for home consumption, shippers doing nothing. The home demand for creamery butter is steadily growing, and the day is not very far distant when every respectable grocer in the towns and cities will be obliged to keep this article and the finest class of dairy output; and the dairy woman who makes anything else but fine butter will have some trouble to find a market for her goods.

PRIZE LIST OF THE WESTERN FAIR.

HORSES.

BLOOD HORSES—Aged Stallion—1, R. McEwan, Byron; 2, T. D. Hodgins, London. Two-year-old Stallion—1, T. D. Hodgins, London. Any age—R. McEwan, Byron. Brood Mare, any age—J. Dymont, Orkney. Brood Mare, with foal by side—1, J. Dymont; 2, F. J. Hodgins. Three-year-old Filly—1, J. Dymont; 2, T. D. Hodgins. Yearling Filly—1, J. Dymont; 2, F. J. Hodgins. Yearling Filly—1, J. Dymont; 2, T. D. Hodgins. Yearling Filly—1, J. Dymont; 2, F. J. Hodgins.

CARRIAGE HORSES—Aged Stallion—1, E. W. and G. Charlton, Duncrief; 2, T. D. Hodgins; 3, W. H. Millman, Woodstock. Stallion, three years old—1, W. Vanpatter, Avimer; 2, T. D. Hodgins; 3, W. H. Millman, Woodstock. Stallion, two years old—1, T. D. Hodgins; 2, J. Cady, Wardsville; 3, D. Dalton, Delhi. Yearling Stallion—1, J. O'Neil & Son, Birt; 2, C. H. Grafton, Metropolitan; 3, W. B. McLean, Hensall. Stallion of any age—1, W. & G. Charlton, Duncrief, diploma, Brood Mare, with foal by side—1, S. Hunt, Delaware; 2, R. M. Wilson, Delhi; 3, J. O'Neil & Son, Three-year-old Gelding or Filly—1, R. M. Wilson; 2, C. H. Grafton; 3, J. O'Neil & Son. Two-year-old Gelding or Filly—1, N. McGill, Glanworth; 2, C. H. Grafton; 3, S. Young, Crumlin. Yearling Gelding or Filly—1, R. M. Wilson; 2, R. M. Wilson; 3, J. O'Neil & Son. Pair of Matched Carriage Horses (Geldings or Mares) in harness, 16 hands and over—1, R. M. Wilson; 2, C. Rundel, Lambeth; 3, A. Inglesby, Ingersoll. Pair of Matched Carriage Horses (Geldings or Mares), 15 1/2 hands and under 16—1, R. A. Walsh, Stratfordville; 2, N. Norton, London; 3, P. Farrell, Woodstock. Single Carriage Horse (Gelding or Mare), in harness, 15 1/2 hands to 16—1, C. T. Rosser, Denfield; 2, A. O. Graydon, London; 3, B. Davis, Lambeth. Best Mare, any age—R. M. Wilson, Delhi. Single Carriage Horse (Gelding or Mare), in harness, 16 hands and over—1, L. Lewis, London; 2, W. Gartshore, London; 3, R. W. Jackson, Arva.

ROADSTERS—Stallion, aged—1, R. Learn, Avimer; 2, Ford & Murphy, Mitchell; 3, J. Beeson, Clinton. Stallion, three years old, Excelsior Stock Farm, London; 2, G. W. Langs, Tilsonburg; 3, T. Bissitt, Exeter. W. H. Millman, Diploma; W. B. McLean, Hensall, Diploma; D. W. Clark, Stratford, Diploma. Stallion, two years old—1, C. E. Bateman, Longwood; 2, Excelsior Stock Farm, London; 3, J. C. Coughlin, Glanworth. Yearling Stallion—1, O. A. Coates, Bothwell; 2, Charlton & Paul, Coldstream; 3, P. Farrell, Woodstock. Stallion of any age—1, Charlton & Paul, Coldstream. Brood Mare with foal—1, J. H. Kennedy, Canning; 2, F. C. Chittick, Dorchester; 3, W. Burton, Kintore. Three-year-old Gelding or Filly—1, A. J. Jarvis, London; 2, G. T. Gurnet, Ingersoll; 3, D. McPherson, Glanworth. Two-year-old Gelding or Filly—1, J. H. Kennedy; 2, P. Farrell; 3, R. W. Wilson. Yearling Gelding or Filly—1, J. Whitton, Thamesford; 2, D. Carroll, Baling. Yearling Gelding or Filly—1, J. H. Kennedy; 2, F. E. Chittick. Pair of Roadsters (Geldings or Mares), in harness—1, H. Evely, St. Thomas; 2, Dr. Routledge, Lambeth; 3, J. McArthur, Craig. Single Roadsters (Geldings or Mares), in harness—1, G. W. Langs, Tilsonburg; 2, J. Hawshaw, Exeter; 3, P. J. Henry, Wallacetown. Best Mare, any age—G. W. Langs, Tilsonburg, Diploma.

GENERAL PURPOSE HORSES—Stallion, aged—1, I. W. Horton, Shedden; 2, J. Anderson, Frome; 3, L. Waller, Tilsonburg. Canadian French Stallion, pedigree required—1, J. McCarty, Thamesford. Three-year-old Stallion—1, J. J. McLaughlin, Clinton; 2, A. Hughes, Kerwood; 3, W. Dale, Seaforth. Two-year-old Stallion—1, S. Hardie, Devises; 2, G. Duffield, Granton; 3, W. Dale, Seaforth. Yearling Stallion—1, J. Palmer, Fingal. Stallion of any age—1, J. McLaughlin, Diploma. Brood Mare with foal—1, A. C. Graham, Lyons; 2, J. Prouse, Ingersoll; 3, W. F. McGuffin, Thordale. Three-year-old Gelding or Filly—1, G. Dickie, Hyde Park; 2, A. Douglas, Kintore; 3, E. Winnett, London. Two-year-old Gelding or Filly—1, A. C. Graham, Lyons; 2, T. Shore & Bro., White Oak; 3, A. Douglas, Yearling Gelding or Filly—1 and 2, A. C. Graham; 3, D. McMillan, Cobble Hill. Foal—1, A. C. Graham; 2, J. Prouse, Ingersoll; 3, D. McMillan, Cobble Hill. Best Team (Geldings or Mares)—1, J. Walton, Woodstock; 2, F. Kerr, Dutton; 3, B. Matthews, Denfield. Best Mare of any age—A. C. Graham, Lyons, Diploma.

SADDLE HORSES AND HUNTERS—Saddle Horse (Gelding or Mare)—1, J. Fulcher, London; 2, G. F. Gurnett, Ingersoll; 3, L. Meredith, London. A. O. Graydon's horse was recommended for special prize. Ladies' Saddle Horse, ridden by lady, if possible—1, J. Fulcher; 2, Rachel Hunter, London. South; 3, A. Allister, London. Hunter (heavy weight), up to 15 stone—1, L. Meredith; 2, R. W. Jackson, Arva; 3, A. Allister. Hunter (light weight) up to 11 stone—1 and 2, J. Fulcher; 3, J. S. Brown, London. Horse (best leaper)—1 and 3, J. Fulcher; 2, J. Dymont, Orkney.

AGRICULTURAL HORSES—(Exclusive of pure Clydesdales, Shire-bred, Norman Percheron and Suffolk Punch)—Stallion, four years old and upwards—1, W. H. Graham, St. Mary's; 2, T. J. Cornish, Crampton. Three-year-old Stallion—1, W. Wilson, Ripley; 2, C. H. Wross, Forest; 3, J. Sample, Cherry Grove. Two-year-old Stallion—1, J. Sims, Kintore; 2, W. Knapton, Ballymote; 3, M. McNabb, Cowal. Yearling Stallion—1, P. Yates, Kintore; 2, D. Stewart, Kintore. Stallion of any age—W. H. Graham, Diploma. Brood Mare, with foal—1, J. Sims; 2, J. Prouse, Ingersoll; 3, A. C. Graham, Lyons. Three-year-old Gelding or Filly—1, R. H. Stoddall, Denfield; 2, A. Hughes, Kerwood; 3, W. Glen, Glanworth. Two-year-old Gelding or Filly—1, D. Palmer, Putnam; 2, R. H. Siddall, Yearling Gelding or Filly—1, J. Prouse, Ingersoll; 2, J. Sims. Foal—1, J. Sims; 2, J. Prouse; 3, A. C. Graham. Best Team (Geldings or Mares), in harness—1, P. Farrell; 2, L. Leitch, Ekfrid. Best Mare of any age—J. Prouse.

HEAVY DRAUGHT HORSES—Heavy Draught Stallion, aged, Clydesdales—1, Dow & Cholhoun, Exeter; 2, R. McEwan, Byron; 3, Darcey & Breon, Luan. Heavy Draught Stallion, aged, English Shire or Cart Horse—1, D. Clark, Lucknow; 2, McLachlan & Longfield, Crampton; 3, J. P. Fischer, Auburn. Three-year-old Stallion—1, J. Henderson, Belton; 2, F. Shore & Bro., White Oak; 3, W. Thompson, Burnam. Two-year-old Stallion—1, W. H. Graham, St. Mary's; 2, P. Curton, Adore; 3, Dow & Cholhoun, Exeter. Yearling Stallion—1, T. Woodley, Brucefield; 2, J. McMillan, Constance; 3, A. Marshall, Avr. Draught Stallion, any age—Dow & Cholhoun. Brood Mare, with foal—1, A. Innis, Exeter; 2, D. Clark, Lucknow. Three-year-old Gelding or Filly—1, J. W. Robinson, St. Mary's. Two-year-old Gelding or Filly—1 and 2, D. McClary, Chelmsford; 3, J. W. Robinson. Yearling Filly or Gelding—1, E. W. & Charlton, Duncrief; 2, J. McMillan, Constance; 3, W. H. Millman, Woodstock. Foal—1, D. Clark; 2, A. Innis, Exeter. Heavy Draught Team (Geldings or Mares)—1 and 3, W. H. Millman; 2, F. Bowerman, Exeter. Best Mare, any age—E. W. & G. Charlton.

HEAVY DRAUGHT HORSES, Canadian Bred—Heavy Draught Stallion, Aged—1, D. Clark, Lucknow. Stallion, three years old—1, B. Park, Norwich. Stallion, two years old—1, H. Crich, Seaforth; 2, J. W. Robinson, St. Mary's; 3, R. McEwan, Byron. Yearling Colt (entire)—1, F. McMichael, Seaforth; 2, J. Prouse, Ingersoll. Heavy Draught Stallion, any age—D. Clark, Lucknow. Mare, any age—J. W. Robinson, St. Mary's. Brood Mare, with foal—1, J. W. Robinson. Two-year-old Gelding or Filly—1, J. W. Robinson; 2, D. Clark, Lucknow. Heavy Draught Team (Geldings or Mares)—1, D. A. Murray, Beaumont; 2, P. Farrell, Woodstock.

PUNCH HORSES—Thoroughbred Stallion, Aged—1, J. Beck, Thordale. Thoroughbred Stallion, any age—J. Beck, Thordale. Brood Mare, any age—J. W. Salmon, Thordale. Brood Mare, with foal—1 and 2, J. Beck. One-year-old Gelding or Filly—1, J. W. Salmon. Foal—1 and 2, J. Beck.

NORMAN PERCHERONS, Imported and bred from pure imported stock—Stallion, three years and upwards—1, P. Fischer, Auburn. Stallion, any age—Fischer & Anderson, Auburn.

CATTLE.

DURHAMS—Imported and Canadian Bred—Bull, Aged—1, J. Hope, Brantford; 2, Simmons & Quarie, Delaware; 3, H. J. Davis, Woodstock. Bull, two years old—1, Simmons & Quarie; 2, J. Smith, Innerkip; 3, T. Douglass & Son, Strathroy. Bull, one year old—1, T. Russell, Exeter; 2, Simmons & Quarie; 3, H. J. Davis. Bull Calf, under one year—1, J. Hope, Brantford; 2, P. Russell; 3, J. Hope. Cow—1 and 2, J. Hope. Cow—1 and 2, Bull of any age—1 and 2, J. Hope. Cow—1 and 2, J. Hope. Cow was highly recommended. Three-year-old Cow—1, J. Hope; 2, W. J. Biggins; 3, H. Thompson, St. Mary's. Two-year-old Heifer—1, J. Hope; 2, F. Shore & Bro.; 3, H. Thompson. One-year-old Heifer—1 and 2, J. Hope; 3, H. Thompson. Heifer Calf, under one year—1, J. Hope, Brantford. Herd, consisting of one Bull and four Females, over one year old—1, J. Hope; 2, H. Thompson.

GALLOWAYS—Bull, Aged—1, T. McCrea, Guelph; 2, W. Kough, Owen Sound. Bull, two years old—1, W. Kough; 2, T. McCrea. Bull, one year old—1 and 2, T. McCrea. Bull of any age—1, W. Kough; 2, T. McCrea. Cow, Aged—1, W. Kough; 2, T. McCrea. Cow, three years old—1, W. Kough; 2, T. McCrea. Heifer, one year old—1, W. Kough; 2, T. McCrea. Heifer Calf, under one year—1, W. Kough; 2, T. McCrea. Herd, consisting of one Bull and four Females, over one year old, owned by exhibitor—T. McCrea.

HEREFORDS—Bull, aged—1 and 2, M. H. Cochrane, Hillhurst; 3, F. A. Flemming, Weston. Bull recommended. Bull, one year old—1, F. A. Flemming. Bull of any age—M. H. Cochrane. Cow, aged—1 and 2, F. A. Flemming. Cow, three years old—1, M. H. Cochrane. Heifer, two years old—1, M. H. Cochrane; 2, F. A. Flemming. Heifer, one year old—1, M. H. Cochrane; 2, M. A. Heifer, under one year—1, M. H. Cochrane; 2, M. A. Flemming. Best Herd consisting of one Bull and four Females, over one year—M. H. Cochrane.

HOLSTEINS—Bull, aged—1, Oakdell Stock Farm, Pickering; 2, Wyton Stock B. Association, Wyton. Bull Calf, under one year—1, Oakdell Stock Farm; 2, Wyton Stock B. Association. Bull of any age—1, Oakdell Stock Farm. Cow, aged—1, Oakdell Stock Farm; 2, Wyton Stock B. Association. Cow, three years old—1, Oakdell Stock Farm; 2, Wyton Stock B. Association. Heifer, two years old—1, Oakdell Stock Farm; 2, Wyton Stock B. Association. Heifer Calf—1 and 2, Oakdell Stock Farm. Herd, one Bull and four females, over one year—Oakdell Stock Farm.

POLLED ANGUS—Bull, aged—1, Hay & Paton, New Lowell; 2, M. H. Cochrane, Hillhurst. Bull Calf, under one year—1 and 2, Hay & Paton. Bull of any age—Hay & Paton. Cow, aged—1, Hay & Paton; 2, M. H. Cochrane. Cow, three years old—1, Hay & Paton. Two-year-old Heifer—1, Hay & Paton; 2, M. H. Cochrane. One-year-old Heifer—1, Hay & Paton.

Paton; 2, M. H. Cochrane. One-year-old Heifer—1, M. H. Cochrane; 2, Hay & Paton. Heifer Calf, under one year—Hay & Paton. Best Herd, consisting of a Bull and four Females, over one year—Hay & Paton.

JERSEYS, GUERNSEYS, ALDERNEYS—Bull, aged—1, S. Smoke, Canning; 2, J. Turner, Oakville. Two-year-old Bull—1, Oakdell Stock Farm, Pickering; 2, M. H. Cochrane, Hillhurst. Bull Calf, under one year—1, S. Smoke; 2, Oakdell Stock Farm. Bull of any age—Oakdell Stock Farm, diploma and silver medal, awarded by J. Morrison, President, British American Insurance Co., Toronto. Cow, aged—1, S. Smoke; 2, J. Turner. Cow, three years old—1 and 2, J. Turner. Two-year-old Heifer—1, S. Smoke; 2, J. Turner. One-year-old Heifer—1 and 2, S. Smoke. Heifer Calf, under one year—1, J. Turner; 2, S. Smoke. Best Herd, consisting of Bull and four Females, over one year—S. Smoke.

AYRSHIRES—Bull, aged—1, T. Guy, Oshawa. Two-year-old Bull—1, T. Guy. One-year-old Bull—1, M. Ballantyne, St. Mary's; 2, Kains Bros., Byron. Bull Calf, under one year—1, Kains Bros.; 2, T. Guy. Bull of any age—M. Ballantyne. Cow, aged—1, Kains Bros.; 2, T. Guy. Three-year-old Cow—1, M. Ballantyne; 2, Kains Bros. Two-year-old Heifer—1, M. Ballantyne; 2, T. Guy. One-year-old Heifer—1, M. Ballantyne; 2, T. Guy. Best Herd, consisting of a Bull and four Females, over one year—T. Guy.

GRADE CATTLE—Cow, aged—1, J. Morgan, Kerwood; 2, J. Oke, Alvington; 3, R. Shore & Bro., White Oak. Three-year-old Cow—1, J. Morgan, Kerwood; 2, R. Whetter, London. Two-year-old Heifer—1, Hay & Paton, New Lowell; 2, J. McLaren, London; 3, R. Whetter. One-year-old Heifer—1, R. Whetter; 2, J. Houseman, Masonville; 3, J. McLaren. Heifer Calf, under one year—1, J. Morgan; 2, H. J. Davis, Woodstock; 3, J. Houseman. Pair three-year-old Steers—1 and 2, J. T. Coughlin, Glanworth. Pair two-year-old Steers—1 and 2, J. T. Coughlin. Pair Yearling Steers—1, J. McLaren; 2, R. Whetter. Best Herd of five Cows for dairy purposes, to be giving milk at time of show, not to be shown in sections 1 and 2—1, J. T. Coughlin.

FAT CATTLE, ANY BREED—Ox or Steer three years old and under four—1 and 2, Weir & Weir, St. Mary's; 3, J. T. Coughlin, Glanworth. Ox or Steer, two years old and under three—1 and 2, J. Oke, Alvington; 3, Weir & Weir. Cow, four years and over—1, J. Oke; 2, J. Morgan, Kerwood. Cow or Heifer, under four years—1, J. Oke. Best three Steers for shipping purposes, not to compete for any other prize—1, Weir & Weir; 2 and 3, J. T. Coughlin.

SHEEP.

COTSWOLDS—Ram, two shears and over—1 and 3, Laidlaw & Jackson, Wilton Grove; 2, J. Park, Price. Shearling Ram—1, J. Park; 2, Laidlaw & Jackson; 3, McArthur, Lobo. Ram Lamb—1 and 3, Laidlaw & Jackson; 2, J. Park. Two Ewes, two shears and over—1, 2 and 3, Laidlaw & Jackson. Two Shearling Ewes—1, 2 and 3, Laidlaw & Jackson. One Ewe Lamb—1, 2 and 3, Laidlaw & Jackson. One Ram, 2 Aged Ewes, 2 Shearling Ewes and 2 Ewe Lambs—Laidlaw & Jackson.

LEICESTER—Ram, two shears and over—1 and 3, D. Harvey, McGillivray; 2, W. J. Somers; 2, H. Snell & Son, Clinton; 3, E. Gaunt & Son, St. Helens. Ram Lamb—1, W. J. Somers; 2, D. Harvey; 3, E. Gaunt & Son. Two Ewes, two shears and over—1 and 2, W. J. Somers; 2, D. Harvey. Two Shearling Ewes—1 and 3, W. J. Somers; 2, D. Harvey; 3, E. Gaunt & Son. One Ram, two aged Ewes, two Shearling Ewes and two Ewe Lambs—W. J. Somers.

LINCOLNS—Ram, two shears and over—1, W. Oliver, Avonbank; 2 & 3, A. & R. Hyslop, White Oak. Shearling Ram—1, W. Walker, Iderton; 2, W. Oliver; 3, W. Flemming, Wilton Grove. Two Lamb—1 and 3, W. Walker; 2, W. Oliver. Two Ewes, two shears and over—1 and 3, W. Walker; 2, W. Oliver. Two Shearling Ewes—1, W. Walker; 2, W. Oliver. Two Ewe Lambs—1 and 2, W. Walker; 3, W. Oliver. One Ram, two aged Ewes, two Shearling Ewes and two Ewe Lambs—W. Walker.

SOUTH DOWNS—Ram, two shears and over—1, J. Jackson & Son, Abington; 2 and 3, G. Baker, Simcoe. Shearling Ram—1 and 2, J. Jackson & Son; 3, A. Telfer, Paris. Ram Lamb—1, A. Telfer. Two Ewes, two shears and over—1, A. Telfer; 2, G. Baker; 3, J. Jackson & Son. Two Shearling Ewes—1 and 3, J. Jackson & Son; 2, G. Baker; 3, A. Telfer. One Ram, two aged Ewes, two Shearling Ewes and two Ewe Lambs—J. Jackson & Son.

SHROPSHIRE DOWNS—One Ram, two shears and over—1, D. Hamner & Son, Mt. Vernon; 2 and 3, W. H. Beattie, Wilton Grove. Shearling Ram—1 and 2, W. H. Beattie; 3, H. Snell & Son, Clinton. Ram Lamb—1, D. Hamner & Son; 2, C. W. Gurney, Mt. Vernon; 3, H. Snell & Son. Two Ewes, two shears and over—1, D. Hamner; 2 and 3, W. H. Beattie. Two Shearling Ewes—1 and 3, W. H. Beattie; 2, D. Hamner & Son. Two Ewe Lambs—1, W. H. Beattie; 2, C. W. Gurney; 3, D. Hamner & Son. One Ram, two aged Ewes, two Shearling Ewes and two Ewe Lambs—W. H. Beattie.

OXFORDSHIRE DOWNS—Ram, two shears and over—1, 2 and 3, P. Arkell, Teeswater. Shearling Ram—1, 2 and 3, P. Arkell. Ram Lamb, 1, 2 and 3, P. Arkell. Two Ewes, two shears and over—1 and 2, P. Arkell. Two Shearling Ewes—1, 2 and 3, P. Arkell. Two Ewe Lambs—1 and 2, P. Arkell; 3, W. E. Wright, Glanworth. One Ram, two aged Ewes, two Shearling Ewes and two Ewe Lambs—P. Arkell.

Any other color cock-1 and 2, W. Fox. Any other color Hen-1, R. Burroughs; 2, W. Fox.

ANTWERPS-Short-faced any color Cock-1 and 2, W. Fox. Toronto. Short-faced any color Hen-1, W. Fox; 2, A. J. Groves, Toronto. Long-faced Blue Cock-1, W. Fox; 2, J. L. Hobden, Toronto. Long-faced Blue Hen-1 and 2, W. Fox. Silver or Dun Hen-1 and 2, W. Fox. Blue or Black Chequer Cock-1 and 2, W. Fox. Blue or Black Chequer Hen-1 and 2, W. Fox.

TRUMPETERS-Pair-1, H. Hutson; 2, W. Fox, Toronto.

TURBITS-Red or Yellow Cock-1 and 2, W. Fox, Toronto. Red or Yellow Hen-1 and 2, W. Fox. Any other color, pair-1, W. Fox; 2, H. Hutson.

SWALLOWS-Any color, pair-W. Fox, Toronto; 2, R. Burroughs, Toronto.

NUNS-Any color, pair-1, H. Hutson; 2, W. Fox, Toronto.

OWLS-English Blue Cock-1 and 2, W. Fox, Toronto. English Blue Hen-1 and 2, W. Fox. English Black or Yellow Cock-1, W. Fox; 2, R. Burroughs, Toronto. English Black or Yellow Hen-1, W. Fox; 2, R. Burroughs, Toronto. African, any color Cock-1 and 2, W. Fox. African, any color Hen-1 and 2, W. Fox. Any other variety, not specified in this List, pair-1, W. Fox; 2, R. Burroughs.

Best pair Black Barb Pigeons-Diplomas, W. Barber & Co., Toronto. Best pair Dun Carrier Pigeons-Diplomas, W. Fox, Toronto.

POULTRY APPLIANCES-Incubator-Silver medal, Gerrard Incubator Co., Toronto. Artificial Mother-Bronze medal, Gerrard Incubator Co. Brooder-Diploma, W. Crowie, St. Catharines.

Family Circle.

A Midnight Tragedy.

1
Three little mice
All in a row;
Three little tails
Waggle to and fro.

2
Six little eyes
Bright as any bead;
Looking round so sharp
See what mousies need.

3
Lithe tawny form
Crouched upon the floor;
Big green eyes
Peek thro' crack of door.

4
O, very still
Creeps each tiny mouse-
Hark! What squeaks
Echo thro' the house?

5
One 'tween her teeth,
One in each forepaw;
My! What a feast
Has grim puss's maw;

AUGUSTA E. TOWNER.

THE TALE OF "SUSAN NIPPER,"

HOLSTEIN-FRIESIAN, THOROUGHBRED. BY F. E. H. RAYMOND.

"Uncle Smith is gone."
"Gone where?"
"Why, Kate! John means that he is dead!"
"O-oh!" She tried to look sober, but smiled. It was very silly.
"There, mamma-I know I'm a dunce; you needn't frown to emphasize the fact; but in a case like this, where is the use of repining?"
"When did it occur?" asked Mrs. Emalie.
"About two weeks ago. I received word yesterday that I was mentioned in the will."
"Sensible old gentleman. I think I could have poured him, if I had known him. I hope your portion was large."
"As large as that of all the rest."
"How much?"
"Katharine! I'm disgusted with you. So will John be."
"Not a bit, mother, dear. Leave me to manage Jack. I shall have to soon, you know."
The handsome fellow beamed upon her; he had no fear of her management.
"You needn't smile, sir. It's going to be serious for you. See here." She held forth a volume with a glittering title: "How to Manage a Husband. By one of the Managers."
"Lettie Stone sent it. She is the author, and it's making her famous."
"She is an old maid."
"That doesn't matter, it sells all the same. But tell me about your legacy; what is it?"
"A cow."
"A what?"
"A cow; neither more nor less."
"Was the man insane?"
"Not at all. He really hadn't much to dispose of, and he portioned it out equally."
"Humph! What did the rest get?"
"One had the cottage; another, a few bank shares; Henry, a few acres of ground. The division was fair enough. I am satisfied."
"Inheriting a cow! It's the most ridiculous thing I ever heard!"
Off Katharine went in a gale of laughter, but presently observed that her mirth was unshared by the others.

Mrs. Emalie looked perplexed; she was practical, and anything out of the common annoyed her. Jack seemed perfectly serene and content.
"Perhaps you would like to hear about 'Susan Nipper'?"
"And who is she, pray?"
"Kate sat down beside him to listen."
"My legacy. She is a valuable Holstein."
"And why 'Susan Nipper'?"
"Because she is a registered thoroughbred. No other animal can ever bear her name."
"None in its senses would wish."
"Perhaps not. She is young; she will be more famous by and by. Even now she is worth two thousand dollars."
"John Lansing-a cow! Humph!"
"Yes. I was offered that this morning by Mr. Sampson, of Holbridge Farm."
"Well-but why didn't you take it?"
"I preferred-'Susan Nipper.'"
"And what are you going to do with her?"
"Keep her."
"As an attraction, in the store?"
"I fancy there was sufficient 'method' in Uncle John's madness." He knew me when a little shaver, and how I loved a farm; and was always an advocate of every one following 'their bent.' Agriculture was my desire-a drygoods store my fact. Now, I'm going to sell out and buy some land."
Katharine was speechless with astonishment, and Mrs. Emalie prudently left the scene.
"You do not look pleased, darling."
"I am not, I assure you."
"Then I am very sorry."
He drew her close, and smoothed the pretty curls in his tender, awkward way.
"You can't be in earnest, Jack, dear."
"Never more so in my life. It is generally a trifle which turns the course of a man's life, and uncle's legacy has turned mine. You know I have often talked of this."
"Oh, yes! when you are old and retired from business. I wouldn't mind that. Cousin Walter has a farm and an elegant Queen Anne house, and lots of servants. That is nice enough, and the only kind of farming which would suit me."
"You don't know, dear. Why, my sweetest dream is to see you fitting about, caring for our simple but comfortable home, with plenty of room to live, without stifling ourselves in a 'flat,' our own broad fields about us, and no restrictions on enjoying 'the grass.' Then, in the winter, with a cozy sleigh and good horse to carry us over the glittering roads. Here a sleigh-ride is an extravagance for us."
For a moment the pleasant picture her lover drew woke a mild enthusiasm in the gayety-loving heart, but it soon vanished.
"Jack, I will never marry a farmer." The angry flush in the beautiful face emphasized the tone.
"Hush, Kate! don't say things without thinking."
"No, I will not 'hush' and I am thinking."
She sprang up and paced the narrow parlor, whence-in true city fashion-God's daylight was excluded, her dainty white tea-gown trailing over the carpet. Finally she paused before the long mirror.
"I look like it, don't I? A farmer's wife-I!"
Now, Katharine Emalie was in truth a lovely girl. Not a bit more vain than was good for her; just enough so to make her study her own apparel to achieve the best results, and she succeeded in being always charming. She shrank from things ugly and coarse, and-well, she had seen this despised class of women times and times! She knew!
Last summer at Naversink, and the year before among the Berkshires; in those long, delightful drives, when Jack was taking his vacation with mamma and her. He would stand and gossip with mamma, till every old "hayseed" in the community knew and had a kind word for him; while she would watch and pity the wives, in untidy gowns and barren of "frizzes."
Still, there was a piece of work before her, if she was to banish "agriculture" from that obstinate Lansing head over on the sofa-pillow. Preparing to begin the siege, she was disconcerted by the first remark.
"She has beautiful eyes, large and mild."
"Who pray?"
"Susan Nipper."
"Indeed! my rival?"
"Ridiculous, Kate!"
"Isn't it true?"
"Certainly it is not. I thought, at first, that I would sell her; but she looked at me."
"And that settled upon it, 'there is a destiny.'"
"Exactly. Depend upon it, I love the soil; the very odor of it is sweet to me; and to own it, to work in it, to enjoy the freedom of a life in the open fields-oh! I wonder I have ever imprisoned myself in town so long."
"If you had not, you would not have met-me!"
"True, sweetheart-another proof of 'destiny'!"
"But now that I have you, I am free to live out my nature."
"I thought a wife-that is to be-had an interest in-in-her husband's plans." The shyness and the blushes were irresistible. John did what any other lover would have done.
"Ah, yes! a true wife like my Kate!"
"But you have decided without consulting me."
"Why, dear girl, you shall settle all the details, even as to the locality; although, for your sake, I prefer Glastonbury, where your cousin Walter lives."
"Jack, very slowly and bewitchingly, "I am not going to marry a farmer."
"So you said, Pardon my contradicting you."
He tried to kiss her pouting lips, but she drew back.

"No; you are in earnest-so am I. I will not be like those dreadful women."
"You can never be anything but the sweetest in the world!"
"Then you won't give up the notion?"
"I cannot; it is not a 'notion.' In such a life lies my success. We are made what we are; we cannot remodel ourselves."
"Then eccentricity runs in your family, and-excuse me-I am afraid of it. Though you may have had a fancy for it, you had no intention of farming till your uncle died and left you-a cow! Immediately you give up a good business-"
"Which I detest!"
"And put your fortune into a pasture for your cow! I object to have my life ruined, and you forthwith trample my prejudices under foot to indulge the desires of a beautiful, mild-eyed cow! If I rightly understand, the line has now to be drawn between you-wife-and this-cow!"
She had risen and gone away from him, speaking with a distinct inimitable sarcasm.
"Come, darling, don't let us keep this up any longer. Of course it is to make no difference in our lives together; our wedding-day is fixed, thank God! and our home shall be ready."
"No, John." She put out her hand with a forbidding gesture, and all the color left her face. "You have chosen your life, and I choose mine; they do not lie together. Here is your ring. I wish you success, and joy-of 'Susan Nipper!'"
"Sweetheart!" But the slim figure ascending the stair did not turn back, and there was temper as well as obstinacy in "the Lansing head;" so the door was closed between them.

"Mamma, I have 'broken off' with Mr. Lansing."
"Very well, dear. Then we will go abroad for a year or two."
"They did; and for many a month neither heard or knew aught more of the would-be farmer, though Katharine wisely opined that since he was quite free to select his own "locality," it would not be Glastonbury, or any place near, for though Kate was gay, she was restless, and her mother was glad enough to improve the first suggestion to "go home." There they found a letter waiting.
"My dear, Cousin Walter writes that Emily is miserable, the children and the servants running wild; and he wants us to come up for a few weeks and help him out. Are you willing?"
"It doesn't matter. I, too, would prefer the quiet of home, but I feel under obligations to him. He has managed my business most kindly and faithfully since your father died."
"We will go, of course."
Mr. Emalie's hobby was scientific farming, and the Long Acre estate a magnificent one; and he who had not visited this "lion" of the county had missed a glimpse of fairy-land.
"You are not going to send those beautiful animals to a country fair?" expostulated Katharine.
"Certainly; I believe in this kind of life, and all farmers, great or small, must make an exhibit of their best to encourage their neighbors."
"I should think it would discourage them to compete with your stock. It is a foregone conclusion that you will capture all the prizes."
Cousin Walter smiled; he would rather take "first premium" at the forthcoming exposition than be bank president.
"I don't know-I don't know," he said contentedly rubbing his hands. "I thought I had the finest of everything in my line; but, perfect as my herd is, there is one creature I covet."
"And what is that?"
"A beautiful Holstein-Friesian, whose record beats even my 'Maggie Darragh's.' She is owned by a long-headed chap who runs the small farm next mine."
"Why don't you buy her?"
"Can't. Have offered him four thousand, but money seems no inducement. However, she and 'Maggie' are to compete at this fair, and if my neighbor comes out ahead-why, I'll have her, if I have to double my offer."
Katharine felt but little interest in the "Farmers' Show"; yet when the pastures of Long Acre were emptied of their splendid herds, they looked strangely lonely to her; and on the second morning of the exhibition she was quite ready to accept her cousin's invitation to visit the grounds.
"I shall have to leave you alone, though, most of the time. You see, I have so many 'entries' to look after."
"Is your neighbor's cow here?"
His face fell. "Oh, but she's a royal beauty! Not a blemish in her, and at yesterday's milking contest, five quarts ahead of famous 'Maggie Darragh.' I don't know how it will be to-day, but I fear the issue."
"All the world envies you, and you-envy a poor farmer."
"Can't be very poor and own 'Susan Nipper!'"
"Who?"
"Kate visibly started. "Susan Nipper."
"Strange! I knew a cow-I mean, I heard of one-of that name."
"Must have been this one then."
"Why? Can't there be two?"
"Not in registered thoroughbreds. Names may be similar, not identical. But the animal you were acquainted with-may it not have been a Holstein?"
"Yes it was."
"Then it's my neighbor's, and you'll have an opportunity to renew civilities. Was it in Hol-land?"

The girl did not reply; she was too busy wishing herself at home.

It was a noisy, crowded place; and finding the "Exhibition Hall" and the numberless tents uncomfortable, she wandered off towards the rear of the grounds, and found herself among rows of frame cattle-sheds, where were her cousin's quarters. An attendant brought her a camp-chair, and placed her comfortably, where she was glad to rest and watch the midday milking. Now she was here, she wondered about "Susan Nipper," and wished she could see that fateful animal just once, herself unseen.

"Where is the cow that rivals 'Maggie Darragh'?"

"Behind you, miss, in that shed on the left."

Katharine glanced furtively over her shoulder.

What if "her rival's" owner should be present?

But he was not, and she ventured to approach and gaze upon her enemy. Here, too, the milking had just been accomplished, and she found herself listening to the discussions of "the judges."

She fancied that there was something a little strange about "Susan's" attendant; he was evidently indifferent to the success of his side, and she thought he needed watching.

"Where is the owner?" asked one gentleman decorated by a "badge."

"Couldn't come to-day," replied the employe, carelessly.

"No man ought to leave a creature like that in inexperienced hands," said another. "That fellow doesn't understand his business; her yield falls below 'Maggie Darragh's,' yet she's by all odds the finest creature. Well, we'll get around here by six, and see her milked again."

They did, and Mr. Emslie and his fair cousin as well. If her old friend, Mr. Lansing, could not be present, there was no impropriety in her availing herself of this amusement, sheltered behind Cousin Walter's responsibility. The operation was carried on with spirit in the two rival stalls. Mr. Emslie and "the judges" fitted from one to the other; but Katharine was stationary.

Cousin Walter and the others drawing near, she appealed to them, and one in authority commanded, briefly: "Try it over."

The accused refused to obey.

"Oh, but you shall!" cried Kate. "It's cheating, else."

"Maggie Darragh's" owner is here to look after his own affairs, and his men are honest; but you, either ignorantly or purposely, have blundered."

"Quite right," said "Judge" Deniston. "If there's a question of fraud, we'll see that milk re-measured, my man. Is this beautiful creature yours, madam? Are you Mrs. Lansing?"

Poor Katharine's face was scarlet; but a well-known voice replied for her—for she was dumb.

"Thank you, dear. You have filled my place bravely."

He lifted his hat to the assembly, drew her arm within his own, and led her away. In a dream, she suffered this masterful intruder to place her in his own carriage, and carry her out from the crowded, dusty place to the sweet and open country; and not till he drew rein before the gateway of a vine-embowered villa was silence broken.

"This is where I and 'Susan Nipper' live—waiting for you to come and make a home. Are you ready yet, sweetheart?"

The words were not much, but they roused her from her reverie. After all, it was quite natural, and in the old order of things, for Jack and her to be riding through green lanes and byways; and it was quite the old Kate who turned her tearful eyes, but smiling lips, towards him.

"I'm tired, John, and—I guess—I am ready."

And the way he drew her head upon his shoulder—well, that was quite natural, too!

"But, sir," she cried, suddenly sitting erect, "that man is a cheat. You must discharge him."

"You shall have that privilege, darling—you have earned it."

Cousin Walter drove home very much astonished, and not a little wroth. Mrs. Emslie received his report calmly.

"There they come now—the impudent pair!"

Kate sprang lightly out, and tossed a kiss to her irate relative; then whispered in his ear:

"Patience; you shall have the creature yet."

When the brief wedding-journey was over, and Mrs. Lansing was home at "The Meadows," she dispatched a note to Long Acre.

"FOR SALE—One Holstein-Friesian, 'Susan Nipper.' Price, \$8,500."

The millionaire whistled, laughed, and returned answer.

"Check ready when goods are delivered."

"But, little wife, you won't sell her—my wedding gift to you?"

"Indeed, and I will, sir. That money is better in bank than in a homely, awkward thing, that is likely to get the—the—I don't know what."

"But I am really attached to her."

"Exactly. That is why I hate her. She'll have to go."

And "Susan Nipper" went.

"There is no rule without an exception, my son."

"Oh, isn't there, pa? A man must always be present while he is being shaved."

"My dear hadn't you better send this child to bed. He's too clever!"

A DRAWN GAME.

Edgar Allen Johnson was sitting, on a May afternoon, in the private room of his office in Exchange Court, in the City of Liverpool.

In the eyes of the commercial world Mr. Johnson was a rich man. In the eyes of his confidential clerk and himself his firm was on the brink of ruin.

Nothing short of a miracle could save it, and Edgar knew that the days of miracles were past.

He advanced quickly towards the table and touched a small bell which stood thereon.

A clerk entered the room.

"Saunders, a hansom."

"Yes, sir," and the door closed again.

Mr. Johnson got into his light overcoat, drew on his gloves in the calm, gentlemanly way in which he did most things, took up his hat and stick, went down stairs, and leisurely entered the hansom, which he directed to a certain house in James street.

The most prosperous firms sometimes carry on their business in the dingiest of offices, and the firm of Levi, Dorrell and Co., brokers and shipowners, bore this out faithfully. It was a very prosperous firm, and had during the past year made some very lucky speculations.

Mr. Johnson having instructed the cabby to wait, threaded the tortuous maze of passages which led to the sanctuary where Levi and Co., transacted their business and made their piles of gold. He handed his card to the sunny-looking clerk, and, after a minute's delay, was shown into the room where sat the senior partner, Mr. Levi, and his colleague, Mr. Dorrell.

After a few preliminary remarks—in which as his name, calling, and place of business were chiefly concerned, Mr. Johnson did not find it necessary to employ his inventive talent—he proceeded to enter into the particulars of his projected business with Levi and Co.

"I have been in the habit of shipping cotton from Alexandria by the vessels of Jones & Co.; but if you, gentlemen, can see your way to me, I propose transferring my business to your firm. At present I have two thousand bales of cotton ready to ship here from Alexandria, for which I want an advance of twenty thousand pounds. This, of course, on your receipt of the usual bills of lading from Alexandria; and, with a courtesy bow, should you desire to make any inquiries regarding the standing of my firm, etc., I trust that you will find all things satisfactory."

"We know your firm well by reputation, Mr. Johnson," said Mr. Levi, "though we have not had the pleasure of knowing you personally until to-day."

"Then," said Mr. Dorrell, "after due inquiries—which in your case, Mr. Johnson, are a mere matter of form—we shall be pleased to make you the required advance on receipt of the formal bills of lading from our agents in Alexandria."

Mr. Johnson bowed gracefully, and took his departure.

That night Mr. Johnson had important business, which detained him in his private office until the small hours of the morning. He was writing, not in his usual rapid and continuous style, but laboriously and haltingly. Had you stood behind his chair for a second, you would have seen that he was carefully copying a signature, which read thus: "Abdul Pineró."

He spared no pains with his work, and it was long after midnight when he leaned back in his chair, and inspected the result of his labors with keen scrutiny and critical approval.

Two days later, he received a note from Messrs. Levi & Co., requesting him to call—a request with which he lost no time in complying. The interview was brief, and conceded all he wished. The firm was willing to grant him the advance he required upon the receipt of the duplicate bills of lading from Alexandria, which they now awaited.

Mr. Johnson took his leave, and repaired to his office, where he told one of his clerks, in a pre-occupied tone, to address an envelope to Messrs. Levi & Co. He subsequently placed in this envelope the forged bill of lading, and sealed it up. Then he wrote a long gossipy letter to a friend in Alexandria, who would suspect nothing—and in a postscript asked him, as a special favor, to post the inclosed letter for him in Alexandria on the day when the ship Estrella was cleared. Having dispatched this letter, he strolled along to Castle street, and gave orders at a certain shop where he was not in the habit of dealing for a small iron-bound box, to be made and sent to his rooms with as little delay as possible.

Three weeks later Mr. Johnson was again in Messrs. Levi & Co.'s office. The bills of lading had been received, and all preliminaries having been satisfactorily arranged, and the necessary documents as to interest having been duly signed, Mr. Levi drew his cheque-book towards him and signed a cheque for twenty thousand pounds.

The Estrella was signalled in due course, and Messrs. Levi and Co., despatched a clerk to the docks for the ship's papers.

The captain was on deck as the clerk—who, by the way, was named Davis—crossed the gangway.

"Good morning, Captain Marsh," he said, pleasantly.

"Good morning," returned the captain, gruffly.

"Had a fine passage?" pursued Davis.

"Middling."

"Rather a heavy cargo this time, haven't you?"

"No, lighter than usual."

"But," said Davis, with an air of surprise, "you have got two thousand bales of cotton on board, from Pineró & Co."

"Haven't a bale of cotton on board," returned the captain.

"What!" said the astonished clerk; "are you sure?"

"Sure? Of course I'm sure," answered the captain, in surly tones. "Who should know, if I don't?"

"Well, I may just go back again," said Davis.

"You'd better," observed Capt. Marsh, grimly; "you'll not find what you're looking for here."

Davis made his way back to his employers' office, and with considerable trepidation informed them of the non-arrival of the expected cargo. Dorrell turned pale, and Levi became perfectly green.

A hurried telegram was despatched to the agents in Alexandria; and in the course of a few hours the answer was flashed back:

"No such consignment despatched to you. Some mistake."

In five minutes Mr. Levi was driving furiously up to Exchange Court where, it is needless to say, he did not find Mr. Johnson; nor did he find any one connected with the firm. The door leading to the offices was locked and a card neatly tacked on it, bearing the inscription:

"On the Continent for an indefinite period."

Upon reading this announcement Mr. Levi burst into the next office with such sudden violence that the clerks jumped from their stools in dismay; but he learned, in answer to his almost inarticulate inquiries that the office of the Johnson and Co. had been closed for rather more than a week.

Upon arriving in James Street, Mr. Levi was in a state of agonized rage and excitement baffling description. He was a singularly choleric old gentleman, and he threw himself into his chair, flinging his hat upon the ground.

"We've been swindled!" he almost shouted, excitedly. "Swindled!"

Mr. Dorrell sat for a few minutes pale and silent; but in all firms of two or more partners there is usually one who talks, and one who acts, and in this firm Mr. Dorrell was always the one who acted.

"We had better send for Bolton," he said at last, and Bolton, the celebrated detective, was sent for.

The affair was placed entirely in his hands, and after some days' inquiry the firm of Levi and Co. found that they had been very successfully swindled, all the documents being forgeries. Mr. Levi's cheque, which had been cashed on the day it was received, all in Bank of England notes, none of which had been passed or changed in Liverpool. The inference was that Mr. Johnson had taken them with him to London with the intention of changing them into gold. It was for this purpose, Mr. Bolton said, that the previously mentioned iron-bound box had been ordered by the thoughtful and accomplished Mr. Johnson—twenty thousand pounds of gold being, as the detective dryly remarked, rather an awkward sum to carry about on the person. It was also ascertained that Mr. Johnson had left his rooms more than a week ago at a late hour in the evening, and that a gentleman, answering his description, had, on that same evening, taken the night express for London.

"But how," said Mr. Dorrell, "did he get Pineró's signature to copy?"

"A simple matter," replied the detective. "He had some small shipping transactions with Pineró and Co. before, which enabled him to possess himself of one or two of their forms of bills of lading. This job was not hatched in a few days, believe me."

"The scoundrel!" stormed Mr. Levi, with several strong and effective adjectives. "I'll trace him, I'll hunt him down, if I spend every penny I have in the world. Find him, Bolton, and I will make your fortune."

Two men were lounging, one hot August evening, on the verandah of the Fonda Alameda, at Malaga. Both were smoking, and from their conversation they were evidently recent acquaintances.

"Yes," the elder of the two men was saying, with a strong American twang, "I am travelling for pleasure. I've made a pretty tall sum in mining, and I mean to enjoy myself. I intend running pretty well over Europe during the next month. I don't take sudden fancies now, as a rule," he went on, "but I've taken a fancy to you. I like your sort. What did you say your name was?"

"I didn't say," answered the other, in clear, high-bred tones, "but my name is Frederick Steyne."

"Thank you. Mine is Kemp—Josiah Washington Kemp—at your service. Here's my card. You are an Englishman, I calculate?"

"Yes. You are an American, I presume?"

"That's so," returned the other, sticking his thumbs in the arm-holes of his waistcoat. Josiah Washington Kemp, of New York City, United States. I guess you are travelling for pleasure, too, Mr. Steyne?"

"Well, no," said the person addressed, carefully selecting a fresh cigar; "I am only here on a little matter of business. A relative of mine—an uncle, in fact—died here lately, and left me a small fortune. I thought of starting a business, either here or in Seville."

"You haven't been in England lately, I suppose?" said Mr. Kemp.

"Oh, no," replied the other. "I have not seen England since I left it six years ago. I hadn't the means, even if I had wished it. Besides, I have no longer any interests there."

As he spoke he flicked the ashes from off his cigar and sighed.

"Ah!" said the American.

They talked on indifferent subjects until the clock struck eleven, then they parted for the night.

As the days went on they became fast friends apparently, and the one was rarely seen without the other.

"Look here, Steyne, my boy," said Mr. Kemp one afternoon, as they sat in the shady verandah, "I have an idea!"

"Surely—for Mr. Kemp—that is nothing uncommon," observed Mr. Steyne, with a courteous smile. "I've been thinking," went on Mr. Kemp. "You say you have never seen much of Madrid. Neither have I, and I guess it's an interesting little place. Why shouldn't we take a run up there together; not straight up, but doing all the places of interest on the way?"

"My dear sir," said Mr. Steyne, blowing a tiny curl of smoke into the air as he spoke, "you have misunderstood me, I fear. The little sum my uncle left me, though a fortune to me, does not admit of such extravagance as you mention. Much as I should enjoy the trip—"

"Pooh!" broke in the other, brusquely, "don't let's have any nonsense. My dear Fred, I've more money than I know what to do with! Let me do the thing—I guess you'll be doing me a favor: it's not enough travelling alone, and I tell you I don't know when I've felt so drawn to any one before."

"My dear fellow," replied Mr. Steyne, objectingly, "I really should enjoy it extremely, but you know—"

"Then that's settled," said the American, in brisk tones. "No, I'll take no refusal. We'll start this very day, or to-morrow. We'll have a right royal time."

Mr. Steyne made no further objections. They did start the next day, and they certainly had a royal time. They went from Malaga to Granada, Cordova, Seville, Badajoz, Ciudad-Real, and Toledo, and took the countless other places en route. They visited the Alhambra by moonlight. They attended bull fights by day and masked balls by night, and they spent money like water. Finally they arrived in Madrid, and took up their quarters at the Fonda de Paris, in the Puerta del Sol.

On the second day after their arrival in the Spanish capital, Mr. Kemp, who had been out for some time, entered the cool, marble-tiled apartment, where his travelling companion was stretched upon two chairs, with a cigar between his lips, and a small glass of curacao at his elbow, and said, in accents of pleased surprise:

"Now, isn't this the most fortunate thing? I've just had this—holding out an open letter—sent on from Toledo. It's from an old friend of mine—a countryman too—he's been yachting about for the last few months, and is going to put in at Bayonne. He's very anxious I should meet him there, and take a short cruise, and when he hears that we are together he'll be just as pleased to see you; he's a regularly hospitable fellow, and very rich. Let me see now," running his eye over the letter, "we'll have just about time to get up there by the time he arrives. We'll start at once. He says he has some very pretty girls on board, too. Why, Fred, it'll be a considerable bit of fun."

"I hope you'll enjoy your cruise, Kemp, my dear fellow," said Mr. Steyne, "but I'm sorry I cannot accompany you. I must really get back to Malaga this week. I was just thinking so when you came in."

"Pooh," returned the other, "a couple of weeks or so won't make much difference. Your business can stand, I guess. We'll give up our rooms to-night and start in the morning."

"No, really," persisted Mr. Steyne. "I couldn't think of intruding on your friend's little circle. It's very kind of you, Kemp, but, really, I would rather not."

"Oh, bosh! I won't take any denial," said Mr. Kemp, good humoredly. "If you were once there, I bet I wouldn't get you away in a hurry." He went on, with a sly wink. "All the women would fall down and worship that senior English way you have. You're a sad fellow among the ladies, Fred."

But Fred's mind was made up, apparently. Malaga, and not Bayonne, was his destination; and not all the American's persuasions had any effect upon his determination.

"But, hang it all, why not?" said Mr. Kemp, in exasperated tones, as he sat astride on a chair, leaning his chin on the back and looking puzzled and mortified.

"Shall I tell you?" said the other, settling himself once more comfortably in his chair and leisurely lighting a fresh cigar. "I think you'll admit that my reasons are very good ones. Have a cigar?"

"No," impatiently. "Well—your reasons?"

Mr. Steyne examined the end of his cigar attentively, and then said, fixing his clear eyes on his companion:

"I am in debt to you for a very enjoyable trip—I think quite the most enjoyable trip I ever had. You have been most generous—princely, indeed. I think I may say I shall never forget you, and should we meet again—which, unhappily, is, I fear, a remote chance—I trust we may renew our—hitherto—very pleasant intercourse."

"Yes—yes, that's all very well," interrupted Mr. Kemp, with a wave of his hand. "But it's not to the point. I want to know why you won't go."

"I'm coming to that," said the other, tranquilly. "Unforeseen accidents sometimes happen. Your friend's yacht, for instance, might take a run over to England—while I was on board. Now, the climate of England doesn't suit me. That is one reason. The other reason is this. I like you—nay, I am fond of you—as Mr. Kemp, the American, in Spain—but, in slow, deliberate tones, I don't think I should like you quite so well as Mr. Bolton, the detective—across the frontier!"

For fully a minute there was a dead silence. Mr. Kemp—or rather Mr. Bolton—rose from his chair and moved mechanically to the window. He felt literally stunned and speechless with rage and chagrin—added to the mortifying consciousness of

being as completely done as if he had been the veriest novice in his profession.

"You look faint," observed his companion, courteously. "Pray allow me to ring for some brandy. It will be only a small item in Messrs. Levi & Co.'s already—I fear—rather heavy expenses!"

Mr. Bolton felt as if he could cheerfully have strangled the calm, polished gentlemanly-looking villain, who leaned back in his chair with such easy, unstudied grace, and with that half-mocking smile in his deceitfully frank eyes.

"You are a scoundrel, Mr. Johnson!" he gasped, as soon as he could speak—shaken out of all his usual imperturbable self-possession.

Mr. Johnson shrugged his shoulders gently. "Possibly," he answered, with an exasperating smile. "Had I been otherwise, I will conclude that you would not have taken quite such an interest in me. Do have a cigar; you will find them really good. No? Then have a turn outside. You look rather upset."

Mr. Bolton left Madrid within an hour, but—he did not join his friend at Bayonne. He still vows he'll get Johnson, but up to now it's "A Drawn Game."

What Glycerine Will Do.

Few people realize, says the Scientific American, the importance of the uses of pure commercial glycerine, and how it can be used and made available for purposes where no substitute is found that will take its place. As a dressing for ladies' shoes nothing equals it, making the leather soft and pliable without soiling the garments in contact. Where they sweat, burnt alum and glycerine—one of the former to two of the latter—is rubbed on the feet at night, and a light or open sock worn, the feet washed in the morning with tepid water will keep them during the day free from odor so disagreeable to those persons who are sufferers.

For bunions and corns, cannabis and glycerine, equal parts, painted on the bunion or corn, and bound around with canton flannel, adding a few drops of the liquid to the flannel where it comes in contact with the affected parts, will soon restore it to health.

As a face lotion, oatmeal made in paste with glycerine two parts, water one part, and applied to the face at night, with a mask worn over, will give in a short time, if faithfully pursued, a youthful appearance to the skin.

As a dressing in the bath, two quarts of water with two ounces of glycerine, scented with rose, which will impart a final freshness and delicacy to the skin.

In severe paroxysms in coughing, either in coughs, colds, or consumptives, one or two tablespoonfuls of pure glycerine in pure whiskey or hot rich cream will afford almost immediate relief; and to the consumptive a panacea is found by daily use of glycerine internally, with proportion of one part of powdered willow charcoal and two parts of pure glycerine.

For diseased and inflamed gums two parts of golden seal, one part of powdered burnt alum, and two parts of glycerine, made in a paste and rubbed on the gums and around the teeth at night, strengthens and restores the gums to health, provided no tartar is present to cause the disease, which must be removed first before applying.

Under no Obligation.—Of French "bulls" there are few better than the following:—A Gascon nobleman had been reproaching his son with ingratitude. "I owe you nothing," said the unfilial young man. "So far from having served me you have always stood in my way, for if you had never been born I should at this moment be the next heir of my rich grandfather."

Now is the time to secure new subscribers to the FARMER'S ADVOCATE. Every progressive farmer should have it. Send for extra copies and commence work at once.

The Mother's Duty.

This begins before her arms clasp or her eyes look upon the little face. It begins by such a course of daily living and daily thought as will give her child a sound, healthy body and mind to start with. She should study hygiene, and let her first care be to insure physical health and strength for the little one. It is much easier to train a healthy, well-developed child into a boy or girl of comforting, enjoyable presence, than one that is poorly fed and cared for. Be happy and you will be virtuous, is just as likely to be true as the old saw of, "Be virtuous and you will be happy." And no child can be happy or good whose body is poorly nourished or whose lungs is fed on impure air. Fresh air, sunshine, clean, well-aired beds, simple and well-cooked food, will go far toward building up a healthy, cheerful young citizen or citizeness for the Republic—one who can take up life's responsibilities cheerily, with love to God and man, and do something toward bettering this world of woes and lightening its burdens.

The mother has not only the body but the soul of her child to train. Here, too, is heavy responsibility, and this training also begins at birth. Obedience, perfect truth, loving charity, purity of speech and thought, industry, all are to be taught by the patient mother who needs all of God's grace that one person can appropriate to help her. Children are precious to us, but oh, they are trying beyond description sometimes! And when the poor tired, tried mother has so far lost self-control as to speak loudly or roughly, or let the little rebel see that it has succeeded in provoking her, she has lost just that much ground to be again contended for. Verily, she needs God's grace, and not only that but a goodly share of plain, every-day common sense to enable her to see that she cannot properly do her duty to the children without doing well by herself. She, also, must be rightly fed, and cared for, and rested in body and mind. How can a broken-down, sick, worn-out body and brain care for those fresh, restless little things to whom life is so new, so mysterious that every thought is a question? every flower and blade of grass and wondering insect a miracle? When my little one, aged three, awoke one fair spring morning and her enraptured eyes tell on an apple-tree which had burst under a soft night rain into a shower of bloom, her delight and surprise could find no adequate expression in her limited vocabulary; but I found it easy to impress a lesson the spirit of which she has never forgotten, though she may not remember the words or the occasion. We are not all born with the capability of finding "sermons in stones," but we may be very successfully pointed in that direction.

To be wise and judicious in our management of children—to fill a mother's place—why, it is a task that angels might dread, one that they might envy. The training of immortal creatures for life here and hereafter! There is but one way to do. We are finite and sure to make mistakes over which repentant tears must be shed, but there is a certainty that by constant, prayerful effort we can so rear our children that they, and our neighbors, will rise up and call us blessed. Living in a Christian land, we all know where to go to find instruction and guidance in every emergency of life, comfort in every trouble. The mother who oftenest seeks this aid will be most apt to succeed with the bodies and souls of her children.—[Florida Agriculturist.

Minnie May's Dep't.

MY DEAR NIECES:—Home is always a woman's first thought, and many anxious moments are spent in devising means and ways to beautify them. In summer our country homes are always lovely; the outlook from each window, over fields of waving grain and green pastures, is ever pleasing. But in winter, how different. Snow, snow, everywhere; bleak and desolate. So we must turn our attention to making the inside look as bright and cosy as possible. A stand of pretty, green window plants adds much to the attractiveness of a room, but it must be kept neat—all the dead leaves picked away, and the outside of the pots free from moss. The stand should be on strong rollers, so it can be moved from the window on very cold nights. When we consider the very weak quality of winter sunlight, and how many days he refuses to shine at all, we must select such plants as are beautiful in foliage, or others that will bloom even without much sun. Ferns stand first for indoor cultivation, water and light being all they ask to thrive well. Secure the roots from the woods, with as much earth as possible adhering to them. Then bring enough of the same soil to fill up the pot. Clip off all the leaves, water well, and soon they will begin to put forth their graceful fronds. Hyacinths are easily grown. Plant in pots about four inches in diameter. Water well and put in a dark cupboard or closet. Continue the watering every third day. When shoots appear about four inches high remove to the light, and soon flower knots form and expand, filling the room with delicious fragrance. Hanging baskets are objectionable because of the slop they cause in watering them properly; and if more than one sort of plant is put in some will flourish, others will not; besides, they take up too much light by being hung just in the window. Geraniums are favorites for window culture, but give but little return for all the care bestowed on them; and they positively refuse to bloom only in a very strong light, which we cannot always command; but there is a large family of scented-foilage geraniums, known as Oak-leaf, Crowfoot, Nutmeg and Silver-edge, well worthy of a place on account of the hardy nature and freedom from insects.

Begonias bloom with very little sunshine; and if their blossoms are tiny they make up for it in the quantity; for every tip of the branch has its clusters of little pink blossoms. Calla lilies will bloom well if matured freely and planted in good light soil. Remember, my dear girls, I do not advocate cultivating flowers in windows to the exclusion of air, light and sunshine; these should be admitted freely every day to every room in the house. But some of you can perhaps command an attic, or hall window, where your pets can grow unmolested; and, as they look their loveliest, bring a pot of green and beauty on the centre of your table, where all can admire and enjoy it.

MINNIE MAY.

Minnie May offers a prize of a beautiful gold brooch for the best essay on "How to make Xmas Happy." All communications must be in by the 25th November.

Mother—And the serpent, as a punishment for tempting Eve, was made to crawl all the rest of his life. Bobby—Well, mamma, how did he get along before?

Recipes.

PUMPKIN PUDDING.

Stew slices of pumpkin until soft, strain and mash fine; add three well-beaten eggs and one pint of milk, sugar and spice to taste; bake in a moderate oven, with some bits of butter on top.

CRAB APPLE JELLY.

Fill your preserving kettle with fruit, cover with water, and boil until all are broken; strain through a colander, then run the juice through a jelly bag. Weigh the juice, and for every pound of juice add one of white sugar, and boil until a drop will stiffen on a saucer. Pour into small jelly pots and tie down.

MACARONI WITH TOMATOES.

Boil one pound of macaroni until soft; cut in small pieces; add a small piece of butter, cover with grated cheese, and pour over all some tomatoes served with salt and pepper. Bake for twenty minutes.

STEWED PARSNIPS.

Scrape and slice about one inch thick; boil until soft in enough water to cover them; mix a small lump of butter with a tablespoon of flour, and stir in before removing from the fire.

CABBAGE BAKED.

Boil a nice white cabbage fifteen minutes; then change the water for more boiling; cook until tender and set aside until cold; chop fine; add two well-beaten eggs, a tablespoonful of butter, three of cream, pepper and salt. Stir all well together and bake in a pudding-dish. Serve hot.

GREEN CORN PUDDING.

Scrape from the ear, not cutting too closely, to one pint of corn; add one quart of milk, three eggs, a little suet, sugar to taste and a small piece of butter. Bake two hours.

ARTICHOKES.

Scrape one dozen artichokes; boil until tender; have ready some white sauce, flavored with just a dash of nutmeg; pour over and serve.

BAKED PEARS.

One dozen pears, wipe clean and set in a baking dish, large end down; put a little water in the pan to prevent burning. Bake until tender, and eat with cream and sugar.

STEWED CELERY.

Wash well one head of celery; cut the tender part into one-inch lengths; stew until tender in as little water as possible; when done, thicken with a tablespoonful of butter, rubbed into half an ounce of flour; give it a boil up and serve.

WAKEFIELD PUDDING.

Cut the crust from four slices of bread, and place one of them in the bottom of a deep pudding dish. Spread over this a tablespoon of raspberry jam, then another slice, until all the bread is used. Beat two eggs, and add half a pint of milk; stir one ounce corn starch in; pour over the bread and bake for half an hour.

BOILED ONIONS.

Choose them all one size; peel and boil in two waters until tender; drain and put in the dish from which they will be served; pour over a few spoonfuls of melted butter or white sauce; or they can be baked as potatoes are, and peeled before serving.

STEWED CHICKEN WITH CREAM DRESSING.

Cut up a fowl (an old one will do), as for a fricassee, partly cover with water and stew slowly until tender, take out, pour in the pan a cup of cream, a tablespoonful of bread crumbs and half a chopped onion parboiled. Heat and pour over the chicken.

CABBAGE.

Cut in quarters; pick all the coarse leaves; cut out the stalk; wash well and boil until tender in a wire basket, being careful to change the water. Drain well and add a little butter, salt and pepper.

MILK SOUP.

Four potatoes, two onions, two ounces butter, one-quarter ounce salt, pepper to taste, one pint of milk, three tablespoonfuls tapioca. Boil slowly all the vegetables with two quarts of water. Strain through the colander. Add milk and tapioca. Boil slowly and stir constantly for twenty minutes.

QUINCE PUDDING.

Put one tablespoon of butter into one pint of flour; add a teaspoon of baking powder; mix to the consistency of biscuit dough; roll thin and add quinces, sliced and pared; sprinkle with sugar; roll over and over, put into a mould and steam two hours. Serve with sweet sauce.

FIG PUDDING.

Chop fine half a pound of suet, chop half a pound of figs, and mix with it. Add half a pound of bread crumbs, half a pound of sugar and a teaspoonful of salt, and three eggs. Steam for two hours.

HUNGRY CAKE.

One pound flour, three-quarters pound sugar, half pound butter, one pound currants, four eggs, one cup milk, or cream, two teaspoonfuls baking powder (Royal). Beat up well first the butter; then put the sugar in, then the yolks (well beaten), then the milk, eight whites beaten stiff, fruit and flour last; bake in shallow tin; a few raisins with the currants are an improvement; or use citron peel without fruit.

H. M. COLDWELL.

Answers to Inquirers.

PERPLEXED.—What is the most courteous way for a young lady to invite a young gentleman, with whom she is corresponding, to spend Christmas with her and family at their residence? You do not require a certain form of invitation for that, especially when you are now corresponding with him. Of course you can only invite him with your mother's consent, and the invitation should come from her, either writing herself or you writing for her. No gentleman would think of accepting any girl's invitation to her home without being assured of the approval of her parents.

M. G.—Arkansas is pronounced Ark-ahn-sah with the accent on the last syllable. The name is Indian, and was written phonetically by the early missionaries, so that there can be no mistake about it.

THE MAN FROM CHICAGO'S OPINION.—"In the train between London and Dover," writes Mr. G. A. Sala, *en route* for the sunny South, "I had the advantage of conversing with a gentleman from Chicago, who inquired my destination. I replied that it was Rome. 'Rather risky just now down there, ain't it?' he rejoined. I answered that I had travelled a good deal in earthquake lands, and that in the matter of earthquakes, tempests, fevers, and so forth, I held with the old poet that 'there is no armour against Fate,' and was accustomed to take my chance. My companion from Chicago cogitated for a while, munching the end of his cigar, and then again broke silence. 'Wal,' he remarked, 'maybe you'll be as safe in Rome as anywhere else, for all the old buildings look as if they'd been earthquake over and over again, and the new ones ain't worth earthquakeing.'"

Christmas Presents.

BY MISS MABEL HARDY, CORNELL, ONT.

DEAR MINNIE MAY:—Having seen your offer of a silver brooch for the best variety of suitable presents for Xmas, I beg to send my collection. In my list I have tried to describe such articles as are attractive, yet useful and inexpensive. By giving a few illustrations, I hoped to make my directions more clear.

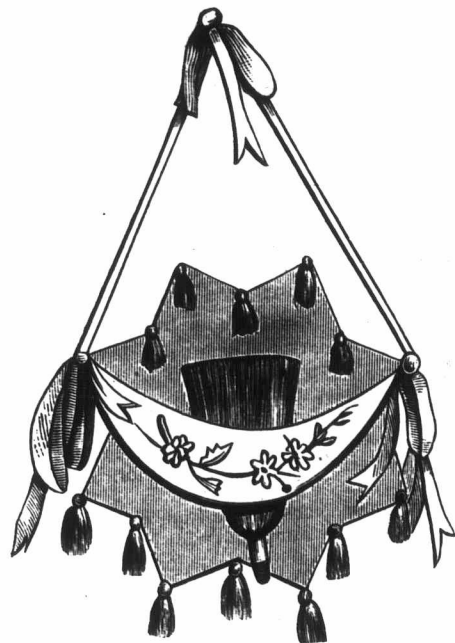
Yours truly, M. H.

SHAVING CASE.

The foundation of the case is of cardboard, cut in any pretty shape. Each side is lined with blue satin and bound with the same, and filled with scalloped pieces of fine-colored tissue paper. A piece of dark maroon velvet is put on the outside of the cover, and nicely embroidered. The two halves are fastened together with ribbon tied in bows.

WHISK HOLDER.

This is very pretty, consisting of a star and crescent. The star and crescent are each covered with plush, and a design in ribbosene and areseene being worked in the crescent. Finish with ribbon to match, and pink and cardinal balls to match the cardinal coverings. My sketch conveys a poor idea of this article.



bon to match, and pink and cardinal balls to match the cardinal coverings. My sketch conveys a poor idea of this article.

A PRETTY BANGLE BOARD.

Take a pretty ear of corn; remove three or four grains, and in their places screw hooks for articles; into the ends fasten a brass-headed tack to hold a ribbon in place, to hang it up by.

Take a small-sized slate; bronze the frame and paint a design on the slate. Screw hooks into the lower part of the frame and suspend with two colors of ribbon. This is a pretty bangle board.

A very useful present is a

MUSIC HOLDER.

The holder consists of two bands of embroidered satin, measuring two inches wide and six inches long. They are lined first with a double fold of stiff muslin, then with satin. They are fastened around the music by a loop of elastic and a button. These are fixed to a handle. One of the handles, such as are used with parcel-straps, would answer for this purpose. It should be covered with plush or satin to match the bands, and be sewn to the bands.

A COMBING TOWEL.

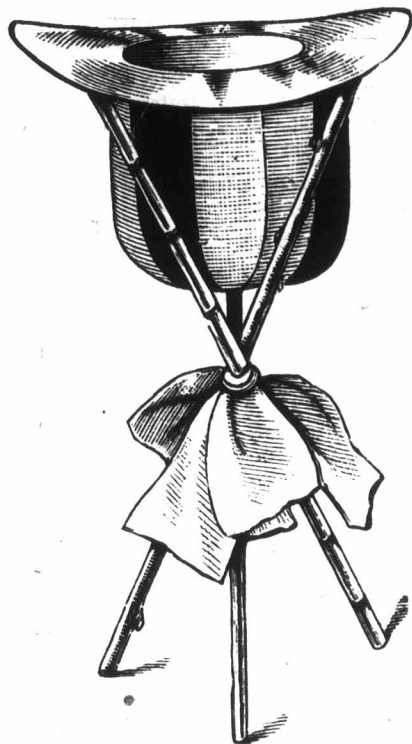
Take a nice, good-sized towel; cut it in two, crosswise, and one-half, lengthwise; slope for the shoulders and hollow for the neck; fasten the front pieces with loops, and on the two corners of the back outline a comb and brush, and three or four hairpins.

SATCHET PIN CUSHION.

A satchet pin cushion, very pretty and decorative, is made of four little bags filled with bran. They are covered with different-colored satins, and for about three inches around the top is a facing of some contrasting color. The bag is firmly tied below this, and the top turned over slightly to show the facing. Fasten the four bags together, having first outlined the words, oats, barley, beans and wheat on the outside of them.

A USEFUL AND NOVEL PRESENT.

Sisters, rob your good-natured brother of one of his worn felt hats. Beg three canes, also, and make a pretty, useful and novel present, in the following manner:—



The outer side of the hat is covered with strips of many-colored ribbon, arranged in rainbow fashion. The inside and brim are lined with pale-blue satin, drawn as illustrated. The tripod formed by the three sticks is caught in the centre by an enormous bow of blue satin ribbon, deftly tied.

LADIES' WORK-BAG.

Can be made of nome cloth, linen, satin, or pongee silk, lined with different colored satin. It is ornamented with intersecting circles, worked in contrasting colors, either darned or woven in silk. An inch and a half from the top are two rows of stitching, through which pass ribbons used as draw strings.

N. B.—This bag is pretty made of gray lustre or poplin, lined with cardinal, and the circles made of velvets appliqued on the goods.

SPECTACLE WIPER.

Have a nice piece of chamois leather, say two inches square, nicely button-hole stitched round the edge for grandpa's vest pocket, for the purpose of wiping off his spectacles.

JUST FOR ORNAMENT.

Take two bottles of any pretty shape and size, and paint them smoothly with either rose pink or robin's egg blue paint. After the first coat dries give them another. Cut a stiff paper pattern of English ivy leaves in two or three sizes; with a pencil draw a vine; then arrange the paper leaves in a natural way along the vine. Outline them with a pencil. Then with a small brush paint both vine and leaves. If the ground color is blue the ivy spray may be gold; if pink, either gold or green. Care should be taken to have the edges smooth and even. When the ivy spray gets dry give the whole bottle two coats of shellac varnish, made by dissolving the best gum shellac in alcohol. A bow of ribbon, the color of the decoration, may be tied around the neck if desired, or a stopper of wood may be made of some pretty design, and painted to match, and a cord and tassel of silk be fastened to the stopper and tied around the neck of the bottle.

SACHET CUSHION.

Dainty, useful and sweet scented, is this ornament for a sofa, easy chair or toilet table. The two bags are made of one piece of silk, satin, or wide ribbon, and filled with cotton batting, well sprinkled with perfume powder, a small



space unfilled being left in the centre, where a ribbon is tied lightly around in numerous bows and notched ends. The lower part of such bag is covered with scrim, the top of which is a covering of gilt soutache braid.

A LAMP MAT.

To make this pretty article, take a sheet of white wadding and cut in strips three or four inches wide. Edge them in wool, either a wide button-hole stitch or with double crochet. Cut a square or round piece of paste-board; cover with a layer of wadding and catch down in squares. Plait in treble-box plaits the strips on to the covered paste-board, and you will find the effect very pleasing.

PAPER HOLDER.

A pretty paper holder is made as follows:—Take an oblong piece of paste-board, large as possible, not too stiff. Line nicely with satene and cover the outside with plush, having a strip of some contrasting color up the centre. Embroider or paint on this strip, and fasten to the front by fancy stitching. Next double together and finish with a rod, which holds the edges together. It is very pretty.

LADIES' WOOLLEN SLIPPERS.

Buy two ounces of some dark shade of double Berlin wool, and one ounce of a light shade, or some contrasting color. Use coarse needles, and knit back and forth on two needles. Cast on 13 stitches, knit across plain; knit off the first stitch of next row plain; then wrap the light-colored wool once round the needle and forefinger of left hand, and knit this in. Knit next stitch plain with dark wool, and so on, with

every other stitch of light wool. Break off light wool at end of each row, knit off one row plain, next row increase one stitch at each end; then put in the light wool in every other stitch in the next row, commencing with the second. Repeat until you have 12 rows of dots. This makes the toe of the slipper. Take off 13 stitches from one end, and knit on as before without increasing the number of stitches, the dots coming alternate, as before, by one row having 6 dots and next time 5 dots. In the row where 5 dots occur, knit off two stitches plain instead of one. Knit a long strip of 32 rows of dots (to go round the foot); join the end of this to the corresponding 13 stitches at the other side of the toe part. Then there will be some stitches, about 11 or 12, on a needle left in the centre of the toe part. Take two other needles to take up stitches all around the top, and knit about 12 rows, as for a stocking. Then cast off. This will roll over and make a pretty finish for the top of the slipper. Put a bow of ribbon on the toe, and if you use cork soles, bind around the edge with braid. This is new and novel.

TABLE COVERS.

A rich and handsome cover may be made of Aida canvas, either square or in scarf style, with a wine-colored plush square in the centre, fastened on with feather stitching in yellow floss. The edge of the canvas should be ravelled out and knotted into fringe, about three inches from which feather-stitch a band of plush, and above this may be a design worked in crewels, if the cover is in scarf style, or in each corner if square.

SMOKING CAP.

Something very nice for a gentleman friend is a smoking cap made according to the following directions:—

This cap, made of Hemingway's silk, is very pretty. Use fine crochet needle.

Make a chain of 3; unite; work in double crochet, always taking up the back of the loop and increasing gradually to keep the work flat until you have worked 12 rounds. By increasing, of course, is meant taking 2 stitches in one loop. This must be done whenever you see the work beginning to draw up around the edges. It must lie perfectly flat.

13th round—3 ch.; miss 2 D. C.; one treble in the next (that is, miss two stitches or loops in the preceding row, and take a treble stitch in the third loop). Repeat this 27 times; in the 9th, 18th and 27th repetitions, leave one stitch only between the treble stitches, instead of two stitches, as in the first.

14th round—* 3 ch.; 1 treble over the next 3 ch.; 3 ch.; 2 treble stitches over the next 3 ch.; repeat from *.

15th round—3 ch.; 1 treble over the next 3 ch.; in this round work 2 treble as often as necessary to keep the work quite flat. Repeat this round 3 more times.

19th round—* 3 D. C. over the 3 ch.; 1 D. C. on the treble; repeat from *; 11 more rounds of D. C., increasing in each to keep the work flat.

31st round—* 3 ch., 1 treble; miss 2 D. C., 1 treble, 3 ch.; miss 3 D. C., 1 treble; repeat from *.

32nd round—* 3 ch., 1 treble over the next 3 ch.; repeat 3 more times, then 3 ch. 1 treble; 3 ch. 1 treble over the next 3 ch.; repeat from *.

33rd, 34th and 35th rounds—* 3 ch.; 1 treble over the next 3 ch.; repeat from *.

36th round—1 D. C. on each treble, 4 D. C. over each 3 ch.

37th and next 3 rounds—D. C.

41st—* 2 D. C.; in the next 4, D. C.; repeat from *; 14 more rounds plain D. C.

56th round—3 ch. 1 treble, *; miss 3 D. C., 1

treble, 3 ch.; repeat from *; repeat the 56th round 5 times more, working the treble over the 3 ch.

62nd round—3 D. C. over the 3 ch., 1 D. C. on the treble; 20 rounds more of D. C. and fasten off. Line the work with silk, and sew in a piece of leather $1\frac{1}{2}$ inches wide for the head; add a lace to draw it up.

I hope the description is intelligible, as the cap is pretty, neat and cheap.

Uncle Tom's Department.

MY DEAR NEPHEWS AND NIECES.—I have just been reading of a very amusing entertainment, which I now give to you for your benefit. It is so simple, that any of you might have it in your homes, or school room, any evening; and I am sure, if any of you try it, you will be highly pleased.

A SHADOW PANTOMIME.

The entertainment which was to come off at Arthur Houghton's had been the chief topic of conversation among the boys for several days, but to all but a favored few its true nature still remained a profound secret. Mysterious preparations were being made, with closed doors, by Arthur and his favorite chums, Clarence Shaw and Percy Earle, and the performance was now announced to take place on the following evening. A neatly-printed poster had been produced, which had exhausted all the resources of Arthur's amateur printing office.

This poster, which as soon as it had been attached to the wall of the village post-office, had been surrounded by a curious group, was worded as follows:—

GREAT SHOW!!

Houghton, Earle and Shaw's
FAMOUS PANTOMIME TROUPE
will appear in their
UNIQUE AND UNRIVALLED EXHIBITION.

—at—

HOUGHTON'S OPERA HOUSE.

—on—

Thursday Eve., Sept. —, 18—, at 7:30 o'clock.

Come one, come all.

Both great and small.

Admission only 10 cents.

The eventful evening came, and the rude board seats of the opera-house—or, in other words, the large unused chamber of a well-kept stable—were soon filled with a somewhat demonstrative audience. When all had been admitted, the manager, who was also door-keeper, surrendered his place to a small boy, and appeared before the large, white curtain, which was stretched across one end of the apartment. His address was exceedingly brief, but to the point. He stated that it would be necessary to lower the lights in the auditorium, and that unless good order was maintained it would be impossible for the performance to proceed. His speech was greeted with great applause, which was succeeded by the silence of anticipation.

The apartment was now in almost total darkness, save for the light reflected from the white sheet which separated the performers from the audience, behind which a large lamp had been placed. The manager, having announced that the first scene would be entitled "The Barber's Victim," hastily retired behind the screen. Immediately after, two shadowy figures appeared upon the canvas and bowed to the audience. The smaller figure, or barber's apprentice, arranged a chair, and an old gentleman entered and was placed in the chair by the boy, who

proceeded to cover him with a sheet, and, apparently, apply the lather with a feather duster. Armed with a huge razor, the barber then made his appearance, when suddenly he was tripped up by the mischievous apprentice, the razor meanwhile striking the recumbent old gentleman and cutting his head entirely off. The barber and his boy, in consternation, consulted together with much dumb show, and finally decided to throw the body up into the air, which they did. After making a bow to the spectators of this tragic act, they also ascended out of sight.

The applause of the audience at the dexterity exhibited in this startling scene had hardly subsided, when "The Dentist" was announced, and, with a similar opening scene, an immense tooth was drawn with a pair of tongs from the suffering patient.

The succeeding acts consisted of a duel, in which long swords were apparently thrust through the bodies of the combatants; a boxing match between a tall man and a short boy, which ended by the boy being thrown into the air and disappearing; a witch, who sailed out of sight on her broomstick, and several other illusions. The entertainment ended with Jack, the Giant-Killer, in which, after hanging the giant, Jack slowly ascended the bean-stalk, which appeared to grow in a marvellous manner.

The way in which these various effects are produced is exceedingly simple, and when properly done, they cannot fail to afford a youthful audience much amusement. Briefly explained, the modus operandi is as follows:—

A sheet is fastened tightly across the room, or, if possible, across the folding doors of a double parlor. The room in front of the sheet must be quite dark. The room where the performers are stationed must be well lighted by a large kerosene lamp, which stands upon the floor. To determine the size of the required figures, let the actors stand within a foot of the sheet and carry the lamp forward or backward, until the right focus is obtained.

To make an actor descend from above, he must stand behind the lamp and slowly step over it. The audience will see first his foot, and then his whole body gradually appears; by stepping backward he can be made to disappear in the same manner.

To throw an actor up out of sight, lift him slowly over the lamp and bring him down again by reversing the process. Two gentlemen, or large boys, and one smaller one, with one lady, if convenient, are enough for most pantomimes, and the properties are easily cut from stiff paste-board if they cannot be readily obtained in the house.

In the performance here described, the startling effect of the decapitation of the old gentleman was accomplished by quickly turning up his coat collar, and drawing the razor across his neck. In the dentist act, the huge tooth was drawn from underneath the patient's coat, while in the duel scene, the swords were merely passed behind the actors to produce the necessary effect. The witch went up on her broomstick by simply stepping over the lamp; and in "Jack, the Giant-Killer," the giant was made to grow or diminish by moving the lamp backward or forward.

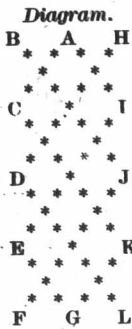
The three members of the "Famous Pantomime Troupe" realized quite a sum from their ingenious entertainment, which was quite a novelty in the little village of L—; and they are now meditating some other sensation of a similar nature.

Let me hear from all of you who may try it—perhaps you may at Xmas time. The year is fast rolling round, and again it will soon be time to decide who are the lucky prize winners in the Puzzle Department. So work well now, and try and get a few extra numbers before January.

UNCLE TOM.

Puzzles.

1-HAT RACK.



A to I—A shrub. B to J—To remove. C to K—A tragic writer. D to L—Caution. E to G—Approaches. A to C—Boundary. H to D—An art of communication. I to E—A species of lizard. J to F—To set a liberty. K to G—Necessarily.

FAIRBROTHER.

2-HALF SQUARE.

1. A gummy substance, which swells in water, but does not dissolve in it. 2. A number. 3. To lease anew. 4. To assert. 5. To locate. 6. Within. 7. In "Uncle Tom."

FAIRBROTHER.

3-DOUBLE LETTER ENIGMA.

In orchard, but not in tree. In scuff, but not in glee. In camel, but not in goat. In recital, but not in quote. In founder, but not in trout. In hesitate, but not in doubt. In double, but not in two. In every man, but not in you. To you I now will give the key, My total is a country free.

FAIRBROTHER.

4-HIDDEN GIRL'S NAMES.

1. Is Ponto mad, Gerald, or angry at us (2)? 2. If an Indian ask for food, give him some. 3. James made lines that were very crooked. 4. Can native Japanese learn our language easily? 5. It would not be right to mar your happiness by being cross.

SNOWBIRD.

5-ILLUSTRATED REBUS.



6-STAIR PUZZLE.

Diagram:—



1. A calcareous shell growing in the sea. 2. Spoken. 3. A fish. 4. The perianth. 5. A nobleman. 6. To inspect closely. 7. Incurring punishment. 8. Wicked. 9. To blast. 10. Complete. 11. Egg-shaped. 12. To make brown. 13. Essential. 14. An image. 15. The prevailing fashion. 16. A prefix. 17. Found in Uncle Tom.

SNOWBIRD.

7-DROP VOWEL PUZZLE.

t-s b-t-t-r t-d--n th-r-ght. Th-n t-sk-lk-w-y fr-m th-f-ld. -tr--m-n n-v-r w-l-y--ld. -f h-kn-ws th-t h-s-c--s-r-ght.

HENRY REEVE.

8-NEW PUZZLES.

Can primal puzzler tell me final. I can find a sacred spot. From which the hand-organ is absent, And where the book agent cometh not—Perhaps in African wilds? Last—wild beast do roam around; I may find the place I long for—Or does no such place abound? I'd go total in this world. If only I'd find peace, Where friends with books ne'er venture, And sounds from organs cease.

A. HOWKINS.

9-DROP VOWEL PUZZLE.

Th-p-th th-t h-s -no- b-n tr-d, -s n-v-r s-r-gh t-th-f-t; -nd th-l-s-s-n w--no-h-v-l-rn-d, -s n-v-r s-h-r-d t-r-p-t.

A. T. REEVE.

10-CHARADE.

My first is to join. My second I sever. My whole is a State. Now guess, if you'r clever.

SNOWBIRD.

11-TRANSPOSITION.

One godin liwl ton fucfcs. Ghhtou goird eb nto ni anvi; Van a lsbuisg, glnlaf su cone ro witec. Yam moce fi ew rty gaina.

A. T. REEVE.

Answers to October Puzzles.

1-Be not the first by whom the new is tried, Nor yet the last to cast the old aside.

2- BRISK BOME IMP ERASE 4-(1) Tay. (2) Po. (3) ROCK Don. (4) Esk. (5) ACT Dwina. (6) Ouse. FLASK LADE ADE 5-Milton, Sterne, Dryden. ANISE NECK ICE 7-Cod. FRISK RARE IRE SE 10-The desert of Sahara.

3- Since God has blest you with the means Of helping those in need, Drive not the wanderer from the door, But them both cloth and feed.

6- Think of something kind to do, Never mind if it is small; Little things are lost in view, But God sees and blesses all.

8- The issues of the life to be, We weave with colors all our own; And in the field of destiny, We reap as we have sown.

Key:—ABCDEFGHIJKLMN O PQRSTU VWXYZ RAJSBKTCLUDMVNWFQXGYP HQZ I

9-Strawberry.

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

Robert Wilson, Libbie Hindley, Emma Dennee, A. Russell Boss, Carrie Sheeres, Mary Drummond-Frank Riddle, A. Howkins, Helen Connell, A. T. Reeve, Cecelia Fairbrother, Henry Reeve, Jessie Stuart, Geo. Green, Emily Orde, T. H. Murray, Chas. Pierce, [Ada Smithson, Sid. Smithson, E. Eulalla Farlingier, Sept.]

A.—"Have you ever noticed how few pick-pockets are arrested in winter?" B.—"Well, there is nothing strange about that. Their season does not open until May. In this climate the weather is so cold people don't take their hands out of their pockets before May."

NEW ADVERTISEMENTS.

SPECIAL NOTICE.

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

Edgemount Fifth Annual Sale

Of 12 Shorthorns, 25 Berkshires, Shropshire rams and horses at the farm on Wednesday, December 5th, at 11 a. m. Eleven months credit on approved joint notes. For catalogues apply to GEO. BAL-LACHEY, JR., Brantford P. O.

SALE OF CATTLE AND HORSES.

—AT SUTTON WEST— ON THE 23RD OF NOVEMBER, Will be sold about 70 head of Shorthorns, registered in D. H. B., equal in pedigree to those registered in England, and 17 horses, preparatory to the owners leaving for China. Catalogues will be issued. F. SIBBALD. 273-b

IMPORTANT PUBLIC SALE

Hereford and Shorthorn Cattle

GUELPH, ONT., CANADA,

Wednesday, Thursday & Friday, NOVEMBER 21, 22 and 23.

MR. F. W. STONE,

Of Morston Lodge, Guelph, will offer for sale on the above dates about 180 head of his pedigree Herefords and Shorthorns. Catalogues can be had after Nov. 5th on application to Mr. Stone, Guelph. 275-a

DOUGLAS H. GRAND,

AUCTIONEER.

Pedigreed Live Stock a specialty. Sales held any part of the country. Terms reasonable. 150 Dundas St., London. 273-1f

BERKSHIRE BOARS

A few Choice Young Boars, 3 to 8 months old bred from first-class importations.

J. C. SNELL,

EDMONTON, ONT.

CLYDESDALE STUD BOOK, VOL. III.

Entries for Vol. III. close early in December. Send your pedigrees in at once. Apply for forms of entry to the undersigned.

HENRY WADE, Secretary, Toronto.

THE "PALMER"

REGISTERED 650 HERD BOOK.

This is one of the best horses of his class in Canada, and has proved himself a sure foal-getter. Any person purchasing him should be able in one season to reimburse himself the price of the horse, as he has stood at his own stable and served from 90 to 100 mares in a season, and insured all mares sent to him at \$30.00 service, and \$1.00 for groom. Owner will give satisfactory reasons for selling.

Apply to JOHN CARSON, KINGSTON, Ont.

COTSWOLD RAM LAMBS

A few Choice Ram Lambs, full of quality and character.

J. C. SNELL,

EDMONTON, ONT.

SIX BOOKS FREE!

We will send THE PEOPLE'S HOME JOURNAL, our large 16-page, 64-column illustrated Literary and Family Paper, Three Months on trial, upon receipt of only Twelve Cents in postage stamps, and to each subscriber we will also send, Free and post-paid, six Charming Books, published in neat pamphlet form, as follows: The Aunt Maguire Documents. By the author of "The Widow BRIDGET PAPER." A ridiculously funny book. Perfect Etiquette; or, How to BEHAVE IN SOCIETY. A complete manual for ladies and gentlemen. Gulliver's Travels. The remarkable adventures of Lemuel Gulliver among the Lilliputians and Giants. The People's Natural History. Containing descriptions of beasts, birds, reptiles, fishes and insects. Illustrated. "A Pleasure Excursion," and Other Sketches. By "JOHN ALLEN'S WIFE." A collection of very funny sketches. Ladies' Fancy Work. A new book, telling how to make many beautiful things for the adornment of homes. Illustrated. Remember, we send the six books named above, also our charming paper for Three Months, upon receipt of only Twelve Cents five subscriptions and five sets of the books for 50 cents. This great offer is made to introduce the paper into new homes. Satisfaction guaranteed or money refunded. Address: F. M. LUPTON, 65 Murray St., New York.

IMPROVED EXCELSIOR INCUBATOR

Simple, Perfect and Self-Regulating. Hundreds in successful operation. Guaranteed to hatch larger percentage of fertile eggs at less cost than any other hatcher. Sent for illus. Cata. GEO. H. STARK, Quincy, Ill.

ONLY \$2000

For 150 Acres of Good Farming Lands within gun shot of the flourishing village of Newbury and the Grand Trunk Railway; all fenced, well drained, 30 acres cleared, balance bush land. Canada Company's Lands adjoining held at \$22 per acre. For further particulars address

The Chatham Mfg. Co. (Limited),
CHATHAM, ONT.

"THE RACER"
THIN BACK, LANCE-TOOTH, CROSS-CUT SAW



THE MAPLE LEAF RACER AND LANCE CROSS-CUT SAWS are now sold in all parts of the world. The quality of these saws is unequalled. Their excellence is wholly due to their superior temper, the process of which is kept a profound secret by Shurly and Dietrich, the manufacturers of these saws. One of the best evidences of their superior quality is that other saw manufacturers put on the market as close an imitation of these saws as they are able to produce, and represent it to be as good as the Maple Leaf saw. They run their saw upon one name until the public become familiar with its inferior quality, then they change the name, in order to humbug the public another season. All of which is the very best evidence of the superior quality of the Maple Leaf saw, as it is not the custom of counterfeiters to do this. These counterfeiters are sold for a much lower price than the Maple Leaf saw can be bought for, the dealer, of course, endeavors to sell them at nearly the same price, thereby realizing a larger profit. And some of the more unprincipled dealers, in order to sell the counterfeit saw, will tell untruths of various kinds regarding the quality of both the genuine and the counterfeit. Good goods are always cheap; poor goods are dear at any price. A saw like a knife will not cut fast unless it will hold a keen cutting edge. Price \$1 per foot. Manufactured only by

SHURLY & DIETRICH,
Saw Manufacturers, GALT, ONT.

TREE GUARDS!

Protect your young trees from field mice by using Greening's Woven Wire Tree Guards. Size, 6 inches high by 5 inches in diameter.

Price, 3 Cents Each.

Sent to any address on receipt of price. Send 3 cent stamp for sample guard.

B. GREENING & CO.
VICTORIA WIRE MILLS,
Hamilton, Ontario.

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

9 Cords in 10 HOURS



Runs Easy
NO BACKACHE
Folded.
274-b

BY ONE MAN. Greatly improved. Also TOOL for filing saws whereby those least experienced can not make a mistake. Sent free with machine. To others, for common cross-cut saws, by mail \$2.00. Run-dreets have sawed 5 to 9 CORDS daily. We want all who burn wood and all interested in the timber business to write for our Illustrated Free Catalogue. We have exactly what you want, the greatest labor-saver and best-selling tool now on earth. First order from your vicinity secured. No duty to pay. We manufacture in Canada. **FOLDING SAWING MACHINE CO.,** 202 to 211 So. Canal Street, Chicago, U. S. A.

CANADIAN PACIFIC RAILWAY.

LOW RATES
TO ALL POINTS

MANTOBA, BRITISH COLUMBIA

—AND—
PACIFIC COAST.

Winnipeg and Return, . . . \$ 45
Banff and Return, 85
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—ALSO—
Best Rates to Montreal, Quebec
and all Intercolonial and New England points.

CALL ON ANY AGENT OF THE COMPANY.
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INTERCOLONIAL Railway of Canada.

THE DIRECT ROUTE BETWEEN THE WEST AND ALL POINTS ON THE LOWER ST. LAWRENCE AND BAIE DE CHALEUR, PROVINCE OF QUEBEC.

—ALSO FOR—
New Brunswick, Nova Scotia, Prince Edward Island, Cape Breton Island, Newfoundland and St. Pierre.

NEW AND ELEGANT BUFFET SLEEPING AND DAY CARS RUN ON THROUGH EXPRESS TRAINS BETWEEN MONTREAL, HALIFAX AND ST. JOHN.

All the Popular Summer Sea Bathing and Fishing Resorts are along this Line.

CANADIAN-EUROPEAN MAIL AND PASSENGER ROUTE.

Passengers for Great Britain or the Continent, leaving Montreal on Thursday morning, will join outward mail steamer at Rimouski the same evening. The attention of shippers is directed to the superior facilities offered by this route for transport of flour and general merchandise intended for the Eastern Provinces and Newfoundland, also for shipments of grain and produce intended for the European market.

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Railway Office, Moncton, N.B., 28th May, 1887.

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—FOR THE—
FARM, GARDEN AND HOUSEHOLD

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Our readers will please understand that these premiums are given for procuring new subscribers, and not to the new subscriber. The Advocate is well worth the Dollar. That there may be no misunderstanding in this matter, we will state that the book premiums will be given to those sending in new names who are already subscribers, or regular agents. Any new subscriber will be entitled to premiums for any subscriptions he may send after his own subscription has been received at this office.

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W. H. ANGER, B. A.,

PRINCIPAL.

N.B.—The best costs no more than the poorest.

274-y

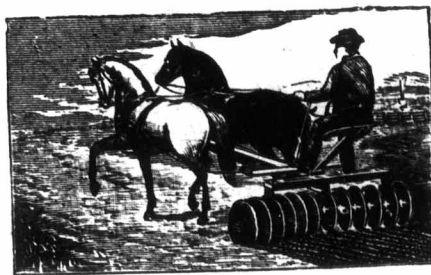
HOME STUDY—Thorough and practical instruction given by MAIL in Book-keeping, Business Forms, Arithmetic, Penmanship, Shorthand, etc. Low rates. Distance no objection. Circulars free. **BRYANT & STRATTON'S, 419 Main St., Buffalo, N.Y.**

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THE "CORBIN" DISK HARROW



In Over 30 Field Trials with Other Disk Harrows the Past Year the "Corbin" was Sold and Settled For. Every Farmer Should Insist on a Trial with the "Corbin" Before Buying any Other.

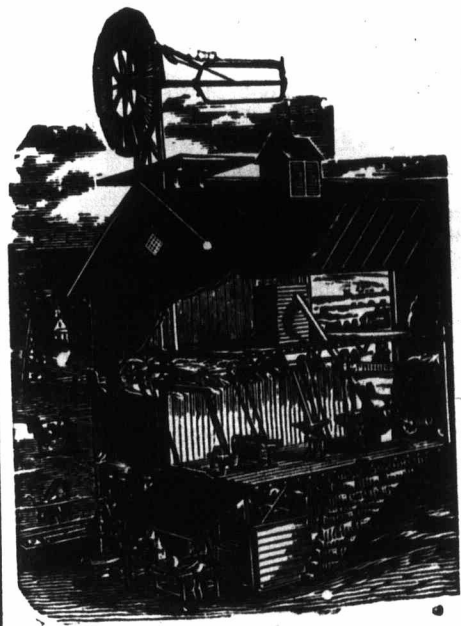
Read What the Best Farmers Say:

Mr. Thomas Shaw, Ed. Live Stock Journal: "No farmer will make a mistake in investing in this harrow."
 Thos. Sabin, Eglington, York Co., Ont.: "I put in a crop of wheat a year ago on pea stubble, going over the ground three times, and secured as good a crop this fall as I ever raised."
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Sold by Van Allen & Agur, Winnipeg, Man.; all agents of the Massey Mfg. Co. in the North west; R. J. Latimer, Montreal, Que.; Johnston & Co., Fredericton, N. B.; Nicholles & Renouf, Victoria, B. C., and 200 local agents in Ontario.

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WIND MILLS, FEED GRINDERS, HAYING TOOLS,
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And a full line of railway, town, farm and ornamental water supply materials. Geared Windmills for driving machinery, pumping water, etc. from 1 to 40 horse-power. Send for Descriptive Catalogue.

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The Platform of this Scale is 6 feet by 4 feet.

No Farmer, Stock Raiser or Produce Dealer should be without one.

It weighs accurately from half pound to 4,000 pounds.

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Quality, Accuracy and Beauty of Workmanship Unsurpassed.

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BURROW, STEWART & MILNE, Hamilton, Ont.

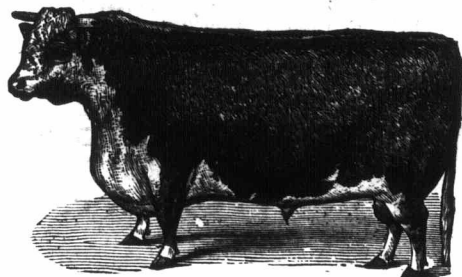
PRIZES.**\$1,500 WORTH of STOCK****GIVEN AWAY!**For Procuring New Subscribers to
the FARMER'S ADVOCATE.**The Most Liberal Premiums Ever Offered**

BY ANY PUBLISHER IN CANADA.

CONDITIONS:

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

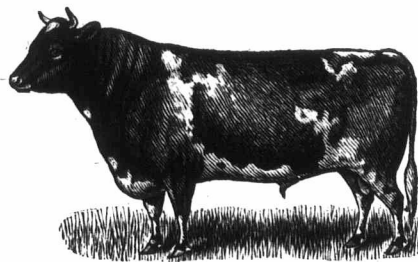
All the animals we offer are of good quality, and are registered or capable of being registered. All are of good families and have good ancestors. The Poultry will be equally good.

Hereford Bull--Value \$150.

For 200 New Names, accompanied with \$200, we will give a pure-bred Hereford Bull, of fine breeding and quality, bred by

R. J. MACKIE,
Springdale Farm, Oshawa, Ont., who is an extensive breeder and importer of
**HIGH QUALITY AND FASHIONABLY BRED
HEREFORDS.**

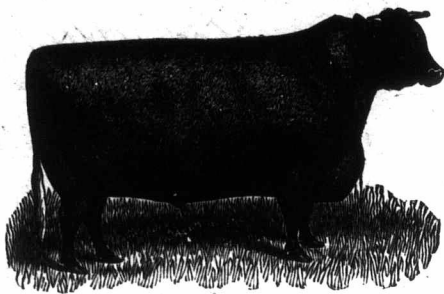
For a description of his herd see June number of the FARMER'S ADVOCATE, page 166. The bull given will be one of Mr. Mackie's finest young animals, and will be fit for service when shipped.

Ayrshire Bull--Value \$100.

For 150 New Names, accompanied by \$150, we will give a first-class Ayrshire Bull from the noted prize-winning herd of

THOMAS GUY,
—BREEDER OF—
Ayrshire Cattle, Leicester and Southdown Sheep,
and BERKSHIRE PIGS.
SYDENHAM FARM, OSHAWA, ONT.

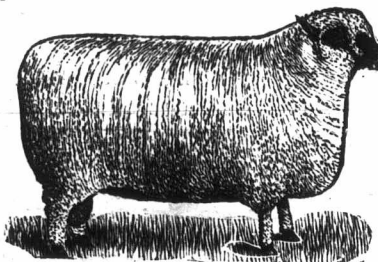
A review of his herd will be found in the September number.

Shorthorn Bull--Value \$150.

For 200 New Names, accompanied with \$200 we will give a pure-bred Shorthorn Bull, bred by

JAMES GRAHAM,
Port Ferry, Ont., a very extensive breeder of
SHORTHORNS and COTSWOLDS

His herd now numbers upwards of 100 head. Highly bred milking strains are his specialty. The bull we will give will be one of his best young animals, and will be highly bred, of good quality and fit for service when sent out. For particulars of this herd see September number of the FARMER'S ADVOCATE.

Shropshire Ram and Ewe Lamb--Value \$40

For 80 New Names, accompanied with \$80, we will give a first-class pure-bred Shropshire Ram and Ewe Lamb, bred by

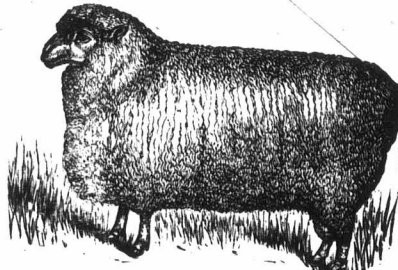
MESSRS. JOHN MILLER & SONS, BROUGHAM, ONT.
the extensive Breeders and Importers of
CLYDESDALES, SHORTHORNS, SHROPSHIRE.

For many years Mr. Miller, sr., has been one of the most famous breeders in America.

Shropshire Ram Lamb--Value \$25

For 50 New Names, accompanied with \$50, we will give a good pure-bred Shropshire Ram Lamb from the famous flock of

John Dryden, M.P.P., Brooklin, Ont
Importer and Breeder of
Cruickshank Shorthorns, Clydesdales, Shropshire Sheep and **Black Minorca Fowls.** Show animals always on hand. See May ADVOCATE, page 138 for description of this herd.

Yearling Cotswold Ram--Value \$40.

For 80 New Names, accompanied with \$80, we will give a show Yearling Cotswold Ram, or a first-class pair of Lambs as the winner may wish, from the well known Cotswold flock, the property of

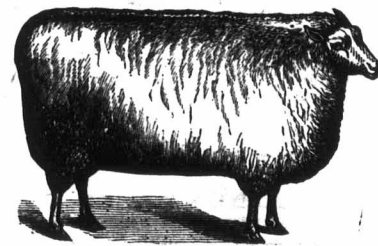
JOSEPH WARD, MARSH HILL P. O., ONT.
Breeder and Importer of first-class
SHORTHORNS, COTSWOLDS, SHROPSHIRE

For many years Mr. Ward's flock has been one of the best in Ontario.

Cotswold Ram Lamb--Value \$15.

For 30 New Names, accompanied with \$30, we will give a good pure-bred Cotswold Ram Lamb, bred by

David Birrell, Greenwood, Ont.,
Breeder and Importer of
CLYDESDALES, SHORTHORNS, COTSWOLDS
For description of herd and stud see June number of the FARMER'S ADVOCATE, page 167.

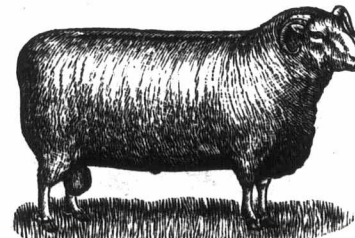
Leicester Ram Lamb--Value \$15.

For 30 New Names, accompanied with \$30, we will give a first-class pure-bred Leicester Ram Lamb, descended from imported stock; bred by

ALEXANDER JEFFREY, WHITBY, ONTARIO.
—BREEDER OF—

**Clydesdales, Shetlands, Shorthorns
and Leicester Sheep.**

For description of stock see September number

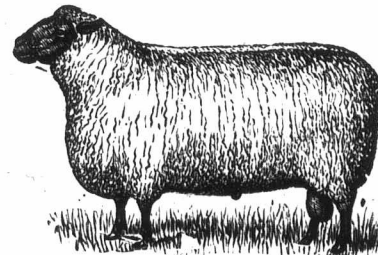
Dorset Horned Ram Lamb--Value \$30.

For 60 New Names, accompanied with \$60, we will give a pure-bred Dorset Horned Ram Lamb, bred by

Capt. Wm. Rolph, Markham, Ont.,
BREEDER AND IMPORTER OF
JERSEYS

OF THE MOST NOTED FAMILIES; also breeder of
Clydesdales, Shetlands and Dorset Horned Sheep.

For description of his herd see July number of the ADVOCATE, page 202.

Hampshire Ram Lamb--Value \$30.

For 60 New Names, accompanied with \$60 we will give a pure Hampshire Ram Lamb of good quality, bred by

MR. JOHN ADAMS, PORT PERRY, ONT.,
—BREEDER OF—

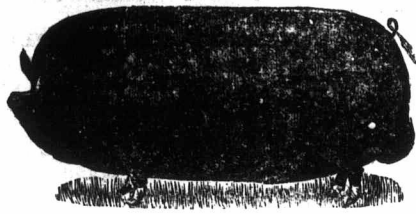
**Shorthorns, Clydesdales, Shropshire & Hampshire Sheep
and BERKSHIRE SWINE.**

See sketch of Ambleside Farm in July number, page 202.

Black Minorcas--Value \$7.

For 10 New Subscribers we will give a pair of Black Minorcas, bred by Mr. John Dryden, M. P. P.

Berkshire Boar--Value \$30.



For 60 New Names, accompanied by \$60, we will give a Berkshire Boar, fit for service, bred by

J. G. SNELL & BRO., EDMONTON, ONT.

They have for sale a good lot of young pigs from two to three months old by the prize-winning boars **RARE SOVEREIGN (490), LORD DERBY (486), BARON VON BISMARCK (426)**, and out of first-class recorded sows. Prices right. In the last six years their Berkshires have won three-fourths of the first prizes offered at the leading shows in Ontario.

BERKSHIRE SOW--VALUE \$30

six months old, or a pair of Berkshire Pigs, eight weeks old, same value, presented by

J. C. SNELL, EDMONTON, ONT.,
Importer and Breeder of

Shorthorns, Cotswolds and Berkshires whose motto is "A good beast with a good pedigree." Mr. Snell ships stock to order and guarantees satisfaction. See August number of the **ADVOCATE** for a description of Willow Lodge.

Pair of Pure Berkshire Pigs--Value \$40.

For 80 New Names, accompanied by \$80, we will give a pair of pure Berkshire Pigs bred by

WM. LINTON, AURORA, ONT.

BREEDER AND IMPORTER OF HIGH-CLASS

Shorthorns, Berkshires and Cotswolds.

Also for 10 New Names, we will give a pair of Black-breasted Red Game, from Imported Stock.

See illustration of bull and history of his herd in August number.

POULTRY.



For 10 New Names we will give a pair, and for 6 New Names one Cock, of any of the following varieties:

Light Brahmans, Dark Brahmans, Langshans, W. F. B. Spanish, Colored Dorkings, Golden Sebright Bantams, Houdans, Rouen Ducks, Pekin Ducks. Valued at \$7 per pair.

For 20 New Names, we will give a pair, and for 12 New Names, one Cock.

Mammoth Bronze Turkeys--Value \$9.

ALL BRED BY

WM. HODSON, BROOKLIN, ONT., for twenty years a successful breeder of the popular varieties of land and water fowls. Send to him for prize and price lists.

White Fantail Pigeons--Value \$7.

For 12 New Subscribers.

We will send to any boy or girl a beautiful pair of White Fantail Pigeons directly descended from Mr. Hodson's pair which took the Silver Medal at the American Centennial of 1876.

ADDITIONAL STOCK PRIZES.

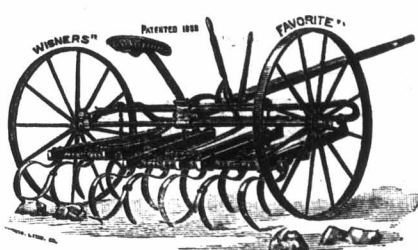
We will give as subscription prizes young animals, either male or female, of any of the following breeds: Shorthorns, Herefords, Galloways, Ayrshires, Jerseys, a bull or heifer of fair quality, purely bred, for 100 new subscribers, accompanied by \$100. We can also supply home-bred or imported stock of any desired breed, age or quality. In all cases we will guarantee satisfaction as to the quality, breeding and value of the animal. We will give very liberal terms to agricultural and other societies, and farmers in new sections: special inducements in sheep and poultry. Write for particulars. We intend distributing large quantities of new varieties of seed grain among our subscribers. Special notice of this will be given during the winter months.

BAIN FARM TRUCK--VALUE \$65.



For 110 new names, accompanied by \$110, we will give one of the celebrated Farm Trucks manufactured by the Bain Wagon Co., Woodstock, Ont. This Truck gives universal satisfaction and should be on every farm.

Patent "Favorite" Iron Frame Section Cultivator--Value \$36.



For 65 new names, accompanied by \$65, we will give one of the above cultivators manufactured by J. O. Wisner, Son & Co., Brantford, Ont., manufacturers of Grain Drills and Seeders, Hay Rakes and Tedders, Spring Tooth Harrows and Cultivators.

CHATHAM WAGON--VALUE \$65.



For 110 new names, accompanied by \$110, we will give a Wagon manufactured by the Chatham Mfg. Co., of Chatham, Ont. This is a very popular Wagon and is known all over Canada.

SULKY PLOW--VALUE \$40.

For 75 New Names, accompanied by \$75, we will give the Western Ho Sulky Plow, manufactured by

COPP BROS., Hamilton, Ont. Send for cuts and information.

Improved Halliday Standard Wind Mill, VALUE \$75.

For 125 New Names, accompanied by \$125, we will give a 10 Foot Improved Halliday Standard Wind Mill manufactured by the

ONTARIO PUMP CO., TORONTO,

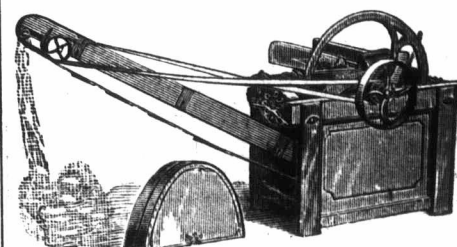
Manufacturers of Pumping and Geared Wind Mills, 1 to 40 horse-power, also I. X. I. Feed Mills, Haying Tools, and Iron and Wood Pumps. Send for Illustrated Catalogue.

HAY LOADER--VALUE \$75.



For 140 new names, accompanied by \$140, we will give one of Messrs. Wilson & Co.'s (of Hamilton) celebrated Hay Loaders, or a Tedder for 75 new names, accompanied by \$75.

FEED CUTTER WITH CARRIER--VALUE \$55.



For 100 new names, accompanied by \$100, we will give one of Messrs. Bell & Son's large Straw Cutters with Carriers, or one of their Root Pulpers, value \$18, for 35 new names.

Agricultural Furnace--Value \$22.

For 40 New Names, accompanied by \$40, we will give a Large Agricultural Furnace manufactured by

The Gowdy Mfg. Co., of Guelph,

MANUFACTURERS OF--

Sulky Plows, Two and Three Farrow Gangs, Feed Cutters, Land Rollers, Reapers, Mowers, Fanning Mills, Turnip Seed Sowers, Harrows, Etc.

FANNING MILL--VALUE \$35.

For 65 New Names, accompanied by \$65, we will give one of the Famous Fanning Mills, with Bagging Attachment, manufactured by

MANSON CAMPBELL, of Chatham.

STOCK SCALES--VALUE \$50.



For 90 new names, accompanied by \$90, we will give one of Osborne & Co.'s Standard Portable Stock Scales; capacity 4,000 lbs. Osborne & Co., Hamilton, manufacturers of all styles of Standard Scales. Send for Illustrated Price List.

Winchester Repeating Rifle--Value \$25.

For 40 New Names, accompanied by \$40, we will give a Model Winchester Repeating Rifle or an Imported English Breech-loading Shot Gun of first-class pattern and make, laminated steel barrels, left barrel choked, top snap, pistol grip, rebounding locks and rubber butt.

A GRAND GUN--VALUE \$40.

For 60 New Names, accompanied by \$60, we will give a very fine English Breech-loading Shot Gun, called the New Model; it has fine Damascus barrels, left barrel full choked, right half-choked, very finely finished throughout. These winning the Guns may have any size of bore they desire. All the Guns are of fine quality and finely finished.

A GRAND REVOLVER--VALUE \$12.

For 20 New Names, accompanied by \$20, we will give a Smith & Wesson Double Action, Self-cocking, Full Silver-plated, 32 Calibre Revolver.

STOCK GOSSIP.

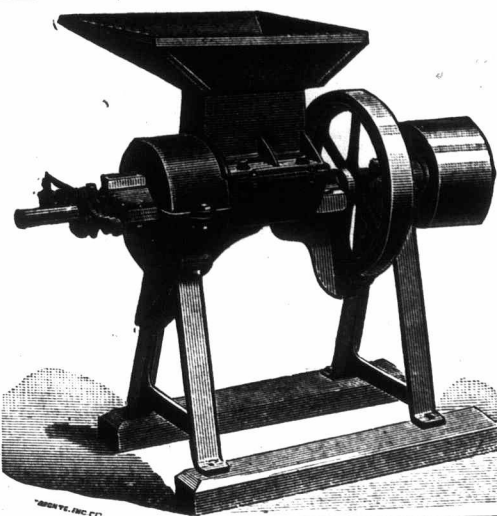
The third volume of the Canadian Clydesdale Stud Book will be closed early in December. Those having horses they wish to record should send in the pedigrees at once if you wish them to appear in this volume, otherwise a year or more will elapse before they can be printed. For full particulars apply to the Secretary, Mr. H. Wade, Toronto.

Owing to the opinion that there would be no sale at the Brians on the 18th inst., as advertised in last issue, because of the terrible accident which befell the proprietor, Mr. Sibbald had, however, given orders that the sale should be held, but the attendance was so small that it was postponed until Nov. 14. As the owner is going to China, all will be sold without reserve; those interested in pure-bred stock should read his advertisement.

The following sales have been made recently from Maple Lodge Stock Farm, property of J. S. Smith, Maple Lodge, Ont.: To Chas. H. Wilson, jr., Greenway, Ont., the young bull "Shotto," got by Duke of Colonus - 9282 - dam Mabel, by Baron Constance 5th - 1378 - one aged Leicester ram; to D. Harvey, McGillivray, Ont., 3 two-shear ram, 3 ram lambs, and one two-shear ewe; to A. W. Dewar, Kertch, Ont., 1 shearing ram; to Jas. Windsor, McGillivray, Ont., 1 ram lamb; to A. B. Hughes, Maple Lodge, Ont., 1 ram lamb; to W. A. Henderson, Nairn, 1 young Berkshire sow; to Jos. Jackson, Mitchell, 1 young boar; to John McKay, Ailsa Craig, one young boar; to Wm. Stevenson, Maple Lodge, 3 ewe lambs.

Messrs. John Jackson & Sons were the only Canadian sheep breeders who exhibited at Buffalo. They took only 14 sheep - 1 aged ram that won 1st prize, 3 shearing rams 1st, 2nd and 3rd prize, 1 ram lamb 1st prize, 2 pens 1st and 3rd prize, 3 in a pen 1st and 2nd prize, 1 pen of three ewe lambs 1st prize; so that they won all it was possible to do. They were also awarded the sweepstake for best ram and five of his get, open to all middle-wooled sheep. Theirs, of course, were all Southdowns. This firm has been awarded about eighty prizes at the leading shows this fall, amounting to \$600.00 on their Southdowns, and have made the following sales since August: Peter Metter, North Pelham, 1 ram lamb and two shearing ewes (imported); Robert Shaw, Glanford, 2 imported shearing ewes; A. Symington, Blackheath, 1 ram lamb; A. N. Carr, Lyons, Pa., 2 rams; Phil Hubbard, Canton, N. Y., 1 ram lamb; L. Griswold, Wayland, N. Y., 1 ram and 2 ewe lambs; Ontario Experimental Farm, Guelph, 1 shearing ram and 5 shearing ewes (all imported); J. W. Bussell, Hornby, 1 ram, 1 two-shear ewe, and 1 imported shearing ewe; T. C. Douglas, Gait, 1 ram lamb and shearing ewe; T. C. Douglas, Gait, 1 ram lamb and shearing ewe (all imported); Geo. Baker, Simcoe, 2 imported shearing ewes; Mr. Burgess, Burgessville, 1 ram lamb; A. Beattie, Vanneck, 1 ram lamb; Wm. Bowman, Flamboro, 2 shearing ewes; L. C. Anderson, Anderson, Ohio, 1 shearing ram.

The Buffalo Fair was a success in many respects, and the managing officers, especially Mr. C. W. Robinson, and his able assistant, Mr. Hause, are deserving of all praise, for upon them devolved the management; and every visitor will testify as to how well they carried out this great enterprise from its conception. The cattle and horse stables, sheep and swine pens, and poultry houses, were the most complete and convenient on any fair ground in this country, and exhibitors of live stock universally expressed themselves in praise of the commodious, comfortable and safe stall room. Pure fresh water was carried in pipes into every third stall. Abundant clean straw bedding was supplied free by the management, and good honest feed at market prices by agreement. The show of horses was the show of rings, where live stock was exhibited for premiums, and where three hundred feet square, and well paved with tan-bark. The exhibition of horses was especially fine; horses came from north, south, east and west. The show of Percherons and Coachers was said to be the finest ever seen in the United States. Michigan sent a grand lot from Savage & Farnum's Island Horse Stock Farm, Grosse Isle, Wayne Co., Mich. - thirty head - and our readers may judge of their worth from the following list of premiums awarded them: - The largest prize offered for horses was a prize of \$400 for a pure-bred Percheron stallion and four of his get. This prize was awarded to Savage & Farnum's Percheron stallion, Pluviose 3755 (683), and four of his colts. Their stallion Horace 7884 (891), took first prize in the three-year-old class. Rigolo 7915 (8354) took first prize in the two-year-old class. Their imported Percheron mare, Paquerette 7906 (283), took first prize over all in the four-year-old class. Their home-bred mare, Fanchon (4389), took first prize in the three-year-old class. Their imported mare, Myrtha 7900 (1113), took first prize in the two-year-old class. Their Exmoor pony stallion, Dandy, took first prize for ponies, and his filly foal, Daisy, took first prize for spring colts. An idea of the competition they had to contend with at Buffalo may be better understood when we say that in many classes as high as twenty-five horses competed. At the Tri-State Fair, Toledo, Ohio, in the sweepstakes, the Tri-State Fair, Toledo, Ohio, took first prize. In their mare, Paquerette 7906 (283), and their mare, Baccarat, each took first prize. Among their stallions, Pluviose 3755 (683), Agricultor 7818 (5247), Rigolo 7915 (8354), Albert-le-Grand 7849 (11674), each took first prize in his respective class. Their imported Percheron mare, Paquerette (4388), Abelle mares, Paquerette 7906 (283), Babette (4388), each headed a class; and their French Coach mare, Baccarat, did the same. This firm have at the present time about 200 horses on their farm, and in a comparatively short time have gained front rank as importers and breeders of Percheron and French Coach horses. They claim to have the finest stallion stables in the United States.

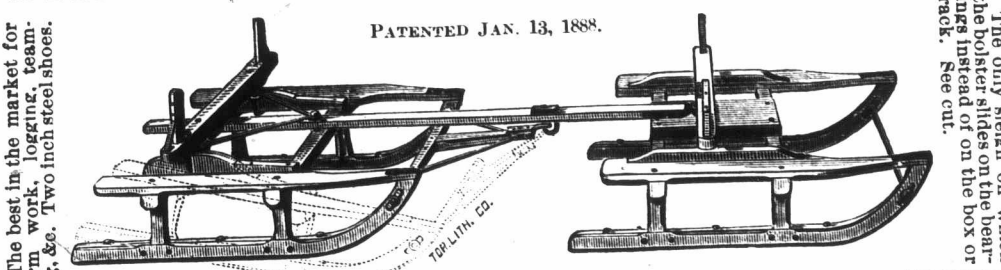


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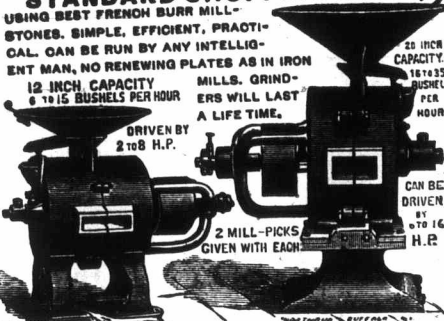
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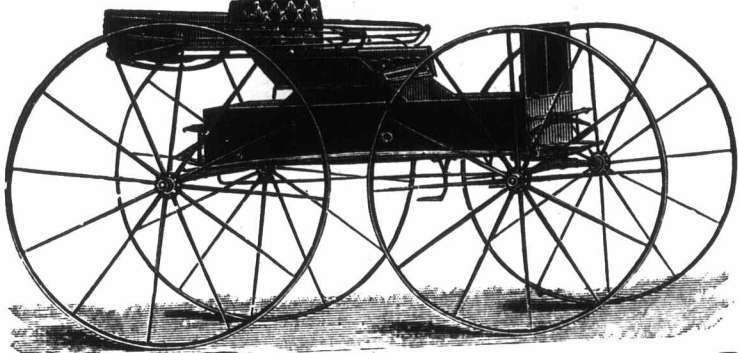
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NOTICES.

Our readers will find in this issue the advertisement of Bryant & Stratton's Correspondence Business College, of Buffalo, N. Y. This school is well known throughout the U. S. and Canada, and is deserving the attention of the general public.

We have received from Messrs. McKay & Wood, of the Dominion Business College, Kingston, a very neatly gotten up catalogue, giving full information about their business college. Young men contemplating taking a course this winter should write for particulars.

In our last issue Mr. F. W. Stone, of Moreton Lodge, Guelph, Ont., advertised that he would sell by public auction, on Nov. 7th to 9th, 180 head of pure bred Herefords and Shorthorns. He has changed the dates of sale to Nov. 21, 22 and 23. Mr. Stone is one of the oldest breeders in the Dominion; many of the successful breeders of to-day, both in Canada and the U. S., founded their herds and flocks from animals bred or imported by this pioneer stockman. See his advertisement in other columns.

We have received enquiries from subscribers in Middlesex County regarding an American firm who are canvassing this county for data and subscribers for an Historical Atlas, which they say they are about to publish. We know nothing whatever of this firm or their mode of procedure. Such works have been published in other counties, and some who have subscribed in such places were satisfied with the work when completed, and others have been very much disappointed. In this case, as in all others, our advice to our readers would be: Sign no printed document, and none that are written by another party. Do your own writing, and do it in your own way. Allow no one to draw a note or order for you, nor allow them to dictate the form. Because others have signed is no reason why you should.

We have just received from Mr. J. Henry Comstock, Ithaca, N. Y., Professor of Entomology, etc., in Cornell University, a copy of the first half of "An Introduction to Entomology," a text book upon which he has been at work for several years. The part published now includes the grammar of the science and about half of the systematic part. This work has been prepared for the use of students in agricultural colleges and for private students, in fact for anyone who desires to find out something about our common insects. Especial pains has been taken to describe the species that are of interest to farmers, and to indicate methods of combatting those that are injurious. A prominent feature of the book is the use of analytical keys, to enable the reader to find out the name of the family to which any insect belongs. These have been prepared with great care. Another special feature of the work is the indication of the pronunciation of the scientific names. The work is ably written and well illustrated and printed, and should be in the hands of every intelligent farmer or horticulturist.



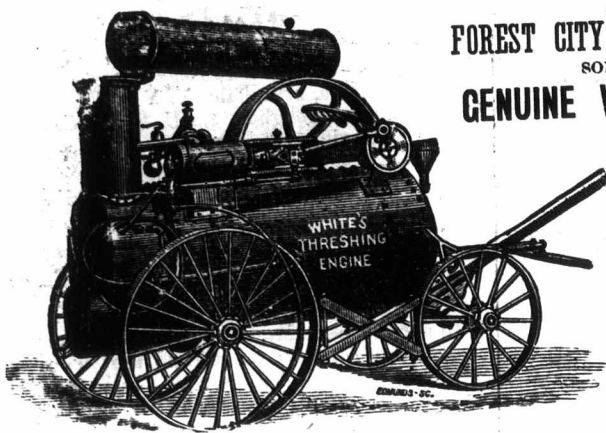
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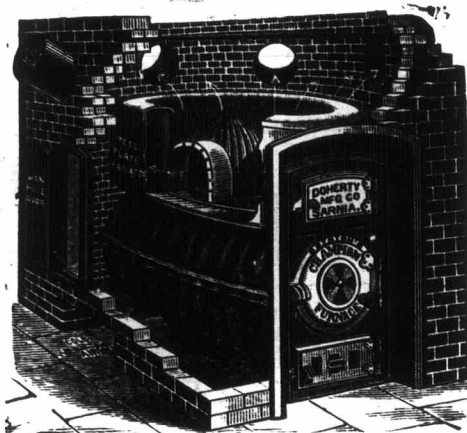
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