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AND HOME MAGAZINE

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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 cliques or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical and reliable information for farmers, dairymen, gardeners and stockmen, of any publication in Canada.

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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 will be given for the best essay on *How Shall we Best Protect our Flocks from the Ravages of the Dog*. Essay to be in this office by the 10th of August.

A prize of \$5 will be given for the best essay on *The Most Successful System of Feeding and Caring for Cows in Stables in Autumn and Winter, Having Special Regard for Purity of the Product*. Essay to be in this office by the 10th of September.

CORRECTION.—In our editorial on Rape, in July issue, in the fourteenth and fifteenth lines from the top, appears the following:—"Sheep feeding on the field were very apt to become lost," and which should read, *very liable to be cast*.

Editorial.

Drought in Manitoba.

As we go to press one of our assistants, writing from Manitoba, says unless the drought is broken immediately, the crops will prove almost an entire failure. Where the subsoil is gravelly the damage is greatest. Much damage has also been done by the gophers.

Pea Harvesting.

In our editorial on this subject, in our July number, we made the statement that the pea harvester, manufactured by the Tolton Bros. of Guelph, could be attached to a wide-out mower, or self-rake reaper. This is a mistake, the harvester is to be attached to a mower of any width, and to mowers only.

Green Midge.

The *Aphis ave*, or as it is commonly called the "Green Midge," caused considerable alarm early in the season; but so far as reported, it has done little or no harm to the wheat; and while it is as likely to attack oats or other green succulent grains as wheat, they have not done so yet in this locality. This insect has so many enemies that it seldom survives to renew the attack the second year.

Holstein Breeders' Association.

As previously announced, we this month publish the papers read before the late meeting of the Holstein Breeders' Association. We intended to publish them in full immediately after the meeting adjourned, but they did not reach us until our issue for which they were intended was being printed, we therefore could not use them then, and since that date have been very much crowded with matter. A few of our readers may have seen a synopsis of these papers, but we deem it to their interest and that of the Holstein breeders to reproduce them *verbatim*.

Toronto Industrial Fair.

Secretary Hill writes us that the prospects for a successful show are good. The rule regarding the close of entries on August 17th, will be strictly adhered to. This will enable the association to issue a reliable catalogue containing all the entries. New stables to accommodate 150 horses have been built; and a new poultry house. These buildings will have all the modern conveniences. The Dominion Kennel Club will hold a bench show on the ground during the exhibition. Two handsome new gate houses will be built. The great feature of the special attractions will be the burning of Moscow, a painting, three hundred feet in length, which will be under the management of Professor Paine, of London, England. The pyrotechnical display in the evening will be grand indeed.

On the Wing.

Dominion Day, July 1st, 1889, dawned beautiful and bright. We leave London by the Michigan Central Railroad in company with some of the members of the Dominion Farmers' Council, who are taking an outing of inspection. The road is in good order, carriages comfortable, company pleasant, and Windsor is duly reached. Carriages are taken and we drive along the banks of the beautiful Detroit River to the Walker farm. A 200-acre field of barley is passed; if fault it has, it might be pronounced too stout. Next we pass on the right hand a 100-acre field of tobacco, in which the cultivators and hoes are being kept in motion. This field has been a wet, damp, cold soil, of a tenacious character, of comparatively little value. Now it is thoroughly underdrained, pulverized by the steam cultivators, clod crushers, etc. It is manured by means of hydrants placed on different parts of the field, through which the liquid manure is forced at the will of the cultivator. This, once wet swaly land, is now a dark, rich, porous garden of as rich, fine quality as anyone could desire. The tobacco has a healthy, vigorous appearance, although the unusually wet spring has retarded the growth, which may be made up, if our season is hot enough, so as to realize as much profit as was taken last year from a smaller portion of this field, namely, over \$8,000. To the left of the road we pass a hop garden containing 100 acres. This field is in grand order. The wet weather does not appear to have retarded the growth of the hops, which already are reaching above the poles and looking all that we could desire, quite as good as the hop vines in Kent, England, look, excepting that in this garden there are a few dead hills to be seen here and there. This would not be seen in England, and must shorten the crop a little from what it might be, but despite this, such is the grand appearance of the field that we should not be surprised to hear of it far exceeding the yields in England. We feel so much pleased with the sight that we desire to see it again, and so would any Kentish man, in fact we might almost add, any person who has ever tasted and appreciated a glass of really good ale.

We next drive to the summerfallow, where two large English agricultural steam engines are stationed about eighty rods apart; a wire cable connects the them. To this cable the plows, harrows, cultivators, stump pullers, grubbers, ditching machines, etc., are attached. When we were there the immense clod crushers were being hauled across the field. The implements are so made as to run either way. A man sits on the implement to guide it as required.

Large fields of barley, oats, potatoes and hay

are passed. The principal complaint that can be made is an unusual one, namely, that the crops are too good, or rather the straw has a very rank growth, such as might prove detrimental to the filling of the grain. The corn shows but a very poor prospect for a crop, the continued wet having destroyed much and retarded the growth of that not destroyed.

Messrs. Walker & Sons possess 10,400 acres, the greater part of which is in Essex County. They cultivate 3,500 acres, perhaps the larger part of which is in grass; also 1,000 acres at Marshfield, a station on the Lake Erie, Essex & Detroit River R. R.; another 1,000 acres is used as a pasture. We passed through some of the cattle byres and saw there hundreds of fattening cattle still left in them. Two thousand nine hundred have been fattened during the present season. A shipment was being made when we were there. The cattle are driven across scales weighing four at a time. The weight of the cattle we saw passing averaged about 5,500 per four head. Two hundred were to be shipped that day for the European market.

We next entered a vineyard containing twenty acres. To our astonishment the grapes here had not been affected by the frost. The vines were well laden and looked vigorous and healthy. On our return trip we called at Mr. Walker's and were introduced to him. He invited each of us to take a glass of lemonade, of which we think all partook, some added a "stick" to it, and all wished Mr. W. health and prosperity in his farming operations.

Although Mr. Walker is an American and holds allegiance to his country, still he highly respects our Queen and our laws. He has made money in our country and is expending large sums in developing our resources. Every farmer should feel gratified with what he has done and is doing in developing our agricultural and other interests. How much more is such a person to be admired than all the Astors, Stewarts, Vanderbilts, Goulds, etc., etc., who have not, as far as we have yet learned, expended any of their wealth in the advancement of agricultural interests.

We then drove to Windsor for dinner, after which we took the ferry across the Detroit River; thence by boat we went to the Island Home Stock Farm, on Gross Isle, Wayne Co., Mich., about fourteen miles from Detroit—having a beautiful ride down the river, passing the new exhibition buildings. These are said to be the largest and best arranged set of agricultural buildings on this continent, and for permanent agricultural exhibitions this continent claims to exceed anything in the world. There can be no doubt but these buildings well deserve a visit, particularly so when they are filled with the best products the States can produce, as no doubt the liberal prize list and the prestige that such a fair will give will induce the producers to exhibit here, whether from the east or west. We arrived at Gross Isle about five o'clock. Mr. Farnum, of the firm of Savage & Farnum, met us at the landing with carriages to drive us to the farm. As some of the party were obliged to leave by the six o'clock boat, a display of horses was at once brought out. About two hundred horses are kept here. The display consisted of the heavy Percheron, the magnificent French Coach horse, the graceful Exmoor and the tiny Shetland. Some perfect models were seen. Some of the party left for the boat, and others

remained. In the evening we had a beautiful drive down the island to the station, and were much pleased with the river on one side and the beautifully laid out grounds on the other, together with the fine show of apples and other fruits that appeared to thrive so well.

In the morning some of the early birds enjoyed a little boating and bathing, others viewed the farm and operations. After breakfast the display of mares and foals was made. All "aboard" for the boat was too soon cried out, and at 9 o'clock our party landed in Detroit. After a view of the cyclorama (the battle of Atlanta), a slight view of Detroit and Windsor, dinner was partaken of, and most of the excursionists that did not return the first day left for home. The report of the committees, etc., etc., will in due time be given in the Council. In the evening we went to see Senator Palmer's stock, consisting of Percherons and Jerseys. His name will not be omitted from the prize list next autumn. Space prevents a detailed account of this fine stock and many other important and interesting features of this trip.

On the third we took the new railroad from Walkerville to Kingsville; here we were pleased to see that the peach crop promises to become a profitable branch of industry. Kingsville, now a pleasant, cleanly, thriving village, situated on Lake Erie, promises, in the near future, to become a town—perhaps a city of note. Its fine soil, healthy and invigorating climate, and its products, must make it a favorite locality. Here on the lake, the Mettawas, the largest summer hotel in Canada, is nearing its completion; over 200 men are rapidly pushing forward the work. It is being fitted up with all the new and most modern arrangements—and annexes to make it all that can be desired as a resort of ease, pleasure, or health. This gigantic undertaking must be seen to be appreciated.

From here we drove about two and a-half miles on a good road, in some places lined by the osage orange, to the natural gas well; the operator at first cautiously let on a little gas, then, by a light on the end of a stick, he carefully ignited it; returning to the well, he let on the gas at its full force, the roar of which is fearfully terrific when near it; it is claimed to be more terrific than the roar of the Niagara; the flame rushes to the height of about eight-five feet; the heat drives those that had not been driven by the sound to give it a wide berth; the pressure is over 400 lbs. to the square inch. This truly may be called one of the wonders of Canada. It appears to us about as wonderful and startling as any; and it puzzles us when we reflect how this immense force is so ably and securely confined, under the control of the operator, so that when it is shut off there appears to be no escape of gas, and yet there is a constant escape of water. We returned to our hotel, astonished, surprised, and delighted with what we had seen. On the fourth we crossed the river, went up Woodward and Jefferson Avenues, took a boat on which a band played God Save the Queen, and Home Sweet Home.

We left for home thoroughly satisfied with our trip, yet tired, as sight-seeing is hard work, and now ruminating in our office on what we have seen, and what good can we do you from this outing. To the point,—many have left here for the Pacific slope and the orange groves of the Sunny South, and many we know have returned from them, glad to get back

to Canada. Many are there that would like to return. This Western Peninsula is, and always has been, as good as any other part of this continent, if a fair average amount of prosperity is considered; the productiveness of its soil being unequalled anywhere, and the land is not yet producing one-quarter of its capacity. If health or morals are of any moment, it still holds the palm. Having been so much pleased with the trip, and not having seen half enough of this part of the country, we hope to see more of it before the end of the year, and if you, reader, are roaming listlessly about, and dissatisfied, as I knew thousands to be last year, don't forget that there is such a place as Western Ontario, where improvements are being carried on faster than in any part of this continent that we have yet visited, and a place where profit is to be made from the judicious application of capital and labor.

The Butter Machine.

During the past five years the deep can system of setting milk has been largely adopted in the best dairy sections, and it is truly a great step in advance, also the separators, which, while extracting more cream from the milk than could be got in any other way are not adapted to private dairying, and scarcely fill the bill for creameries when the gathering route is long; but which, under favorable circumstances, are also a decided acquisition. But it remained for the present season to herald the wonderful story of the Butter Machine or Butter Extractor, the accounts of which almost take our breath, and which we would regard as fabulous, but for the authentic sources from which they came. Think of it! A machine costing but \$450, whirling the butter out of milk warm from the cow at the rate of seventy-five lbs. per hour. The benefits to be derived from such an invention are almost past enumeration: One in a neighborhood would do the churning for all at a price incomparably below the expense of setting the milk and ripening the cream, while the yield in butter would be enough greater to pay the expense a second time. Or in co-operative creameries there would be no occasion for oil tests as at present, for each patron would have the last particle of butter wrung from his milk, and the scales would tell in pounds and ounces what each patron's cows were doing. Should they be generally adopted, they would put the butter of the country on a level equal to the best at present produced. It is a well known fact that private dairies where the milk from one herd only is used, can at present produce a better article of butter than creameries where cream is gathered from patrons, from the fact that in very many cases (it would not be far wide of the mark to say in a great majority of cases) the milk is not handled for best results. With the Butter Extractor this would be overcome, thus leaving no opportunity to injure the naturally delicate flavor of butter except by filthiness in milking, and as the Michigan Creamery aptly puts it, "all would be of a high grade, and not of several degrading qualities as now."

In a good agricultural paper there is found the choicest extracts of experience in farming. The mistakes made in one week would often pay for five years subscription. It is the same with the farmer as with the lawyer, doctor, or editor, to become more intelligent he must read more. No farmer can afford to be without a good agricultural paper. Try the *ADVOCATE* for a year and see if we do not speak the truth.

Forty-fourth Annual Provincial Exhibition.

This exhibition will, in our estimation, be of the most importance to our Dominion, of any ever held on the continent, as agriculture is the support of all. The prizes given by the Provincial carry a prestige on this continent similar to those of the Royal of England, on the continent of Europe, and the best stock will compete for them. The absolute freedom of this section from stock diseases of any kind, being unequalled by any other part of the world, and the fact of it being held before the other shows should induce breeders to patronize it, as they will doubtless have opportunities of disposing of stock for other exhibitions both in the Dominion and the United States.

As the date draws near, the prospects brighten, and when we look over the tabulated statement, as given in our last issue, and see the steady growth of the exhibit, so far at least as London is concerned, we feel encouraged to hope that London will again outdo itself, and make it a grand success. In 1854 this show was held in London for the first time—it being the ninth year of its existence. The entries numbered 2,933, being considerably in excess of entries at any previous exhibition, with one exception.

In 1861 it was again held here, when the entries numbered 6,242, being again in excess of any previous exhibit, except one. In 1865 the entries at London were 7,221, almost a thousand more than ever before. In 1869 the entries numbered 7,649, more than a thousand above any previous year. In 1873 the increase was 706, total number being 8,420. The year 1877 gave 10,618. In 1881 there was a falling off of 1,766 entries, the total number being only 9,486. But it remained for London to excel all other efforts of any place in 1884, when the grand total of 11,662 entries was reached, which was 410 above the number made at any other place. These figures show that London is pre-eminently the best place for the Provincial. And why it is so, is not difficult to ascertain. Situated in the heart of one of the finest agricultural districts on the continent, plenty of absolutely pure water, good accommodation at reasonable rates, good railway facilities, and a convenient show ground that is in good shape in all weathers, all combine to render the exhibition a success, and as success has attended previous efforts, there are many reasons why the exhibition of this year should eclipse all previous ones. The new grounds at London are certainly magnificent, being clean, and at the same time nicely shaded by beautiful pines, and the buildings are new and commodious. In this section are many good stockmen.

Among the features of especial interest for the coming show, may be mentioned the Prince of Wales prize, which will be this year given to the best draught stallion of any age that will record in the Canadian Clydesdale, Canadian Shire, or Canadian Draught Horse books. No entries

taken unless recorded in one of these books. Also a special prize of \$40 by Clydesdale Association of Canada, for the best Clydesdale mare and one of her progeny, both to be the property of one exhibitor.

The special prize given by J. S. Pearce & Co. for the best general purpose flock of sheep of any breed, consisting of one yearling ram, one ram lamb, four yearling ewes, and four ewe lambs, should start a strong competition, and the award will be looked for with interest by all sheep breeders.

A special prize of a silver service, valued at \$65, is given by the FARMER'S ADVOCATE for the three cows giving greatest value in milk solids for food consumed. For the information of our readers, we desire to call attention to the true purpose and possible usefulness of this test as provided for by the conditions already published. No one test can demonstrate conclusively the superiority or inferiority of any one breed of cows. But a test like that proposed will give the special breeders a fair chance of bringing before the public, in an authoritative way, what the best animals of the several breeds can do in the way of showing a profit upon the food consumed.

The interest which this competition is exciting, and the discussion it is creating among farmers, promise that the results will be widely and carefully read. The representatives of the several special dairy breeds should let no feeling

its best interests at heart. It is with pleasure we hail the tendency to adopt the methods of the Royal, and we hope yet to see it reorganized and economically conducted as a purely agricultural exhibition, and solely in the interest of the agriculturist.

This exhibition has been the best agricultural educator in the Dominion; as an agricultural exhibition many Americans that have visited it have pronounced it superior to any held in the States. The Governor-General has been invited to open the Exhibition, and cheap excursions are being arranged for.

Cheap Excursions Contemplated.

We are endeavoring to induce the railroad companies to run special cheap excursions from the Maritime and Eastern Provinces, Manitoba, Michigan and intermediate points, to London, Toronto and Hamilton, during the holding of the exhibitions. This will give farmers and others an opportunity of seeing this western country, and inspecting the greatest stock exhibit to be found on this continent. A few days spent among our exhibitions and in seeing this country, will be a profitable investment to farmers.

We have asked the mayors and corporations of Toronto, London and Hamilton to aid us in this matter, and have sent them the following letter:—

"GENTLEMEN,—For the benefit of Canada, the Canadian farmers, etc. etc. I am desirous of making arrangements for excursions from the Atlantic and Pacific coasts and intervening points at the time of the holding of exhibitions in Toronto and London. I wish time to be given to excursionists so that they may have an opportunity of seeing this the best part of the continent. Should you consider that such an undertaking would be of advantage to this city, would you kindly appoint some one with power to aid in bringing this plan into execution and appoint time and place of meeting."

London has already complied and appointed a deputation to act with the proprietor of this paper. We expect Toronto and Hamilton will do likewise.



44TH PROVINCIAL EXHIBITION TO BE HELD IN LONDON SEPTEMBER 9 TO 14.

of unfriendly competition with other breeders hinder them from arranging with each other to have each breed represented by the very best animals that can be put in. It is within the reasonable probabilities that some special family of extra good milkers in the Dominion, not yet widely or well known, may be brought prominently before the public by means of this test. The rules are published in the prize lists, which may be had by sending a postal card to the Secretary, Mr. Henry Wade, Toronto, Ont. To encourage the Art Department of this exhibition, the FARMER'S ADVOCATE gives three special prizes—two of which are the largest given in the department. They are for the best original pencil drawings of Canadian Rural Scenery, with hope that some of our artists, yet unknown to fame, may compete successfully with those of more mature years, and select such subjects as may merit reproduction, and create a greater love for and admiration of rural pursuits.

A catalogue of the entries will be published for use at the exhibition. This will be of incalculable benefit to both exhibitor and visitor. It will enable the visitor to locate and learn the name of the owner of any animal on the ground, and he will carry away with him an advertisement of each exhibitor. We heartily commend the action of the Board in this matter, and hope to see the system adopted in other instances.

We have seen fit in some instances to criticize the Provincial, and often severely, but with

Eye Grass and Quick Grass.

We have received several specimens of perennial Rye Grass from subscribers, and with it the question, is it Quick Grass? These two grasses closely resemble each other. It will be seen by the illustration, that No. 1, Perennial Rye Grass



has the edge of spikelet, which is naked next the stalk, and in No. 2, Quick Grass (*Triticum ripens*), the spikelet, which is armed with short beards, is converse, or the side to the stock. Rye Grass is not difficult to eradicate when desirable so to do, but many cultivate it. It yields a good crop on rich, moist soil, but is of little value on dry sand or gravelly soils.

The Country Between Winnipeg and Binsgarth, via the C. P. R. to Portage LaPrairie, then via Manitoba and Northwestern Railroad.

(BY ONE OF OUR STAFF.)

On the 10th of June we left Winnipeg and proceeded westward, carefully examining the land and the condition of the farmers along the route. For a short distance the land is somewhat alkaline, but heavy and rich. Professor Macoum says: "These rich alluviums have been the theme of many writers; their fertility and capacity for growing grain continuously is great. The cause of the poor water and alkaline soils in numerous localities can be traced in every instance to the exceeding richness of the soil, and as long as it retains its salts, so long will it be noted for its fertility." Dr. Geo. M. Dawson, naturalist, geologist, etc., in speaking of this and adjoining lands says: "The uniform fertility of the soil cannot be exaggerated. The surface for a depth of from two to four feet is a dark mould, composed of the same material as the subsoil, but mingled with much vegetable matter, and may be said to be ready for the plow. The marly alluvial subsoil would in most countries be considered a soil of the best quality. It may therefore be considered as practically inexhaustible." Fine fields of grain are seen at intervals. The country is flat and apt to be wet in a wet season. In some places drainage would not be easily effected, in other places quite readily. Wood is always visible to the north and south, but no scrub timber on the plains as is seen east of Winnipeg. At Rosser the land is somewhat low and especially adapted for the production of hay, with here and there good grain land. Many cattle are grazed in this section, and much hay annually put up. Wood is near and water good. When drained, this will be a very fine tract for mixed farming. Land can be bought from \$5 to \$6 per acre. At Rosser the altitude is 772 feet. The country continues much the same to Marquette, the altitude of which is 783 feet. From here to Poplar Point (altitude 791 feet), the country gradually changes from a grass and stock section to one adapted to grain and stock. From the last named place to Portage LaPrairie (altitude 830 feet), it is an A 1 country.

The "Portage" is the centre of at least thirty-six square miles of as good grain land as can be found in America. We were assured that the average wheat yield of this tract has been thirty-three bushels. This we think too high, and would put it at twenty-five bushels per acre, though much larger yields are frequently obtained. The wheat fields we saw here were most luxuriant. The prairie is slightly undulating. The farmers are generally prosperous. This and the Brandon district are the most popular wheat sections of Manitoba. The town is a prosperous place; population 3,000. It has four grain elevators, a large flouring mill, oatmeal mill, paper mill, biscuit factory, a foundry, and other industries. Land can be bought in this locality at from \$10 to \$30 per acre, according to improvements and location.

Here we took the Manitoba and Northwestern Railroad, which traverses the country in a north-westerly direction from "Portage" to Salt-coats, a distance of about 200 miles. Between the "Portage" and Macdonald (altitude 803 feet), where there are three elevators, the grain was excellent, very large fields of which are continually seen, and a great deal of new land is being prepared for next year's crop. This section, like other parts of the Portage plain, is adapted to grain, but little stock, except the working horses are kept by the farmers. The natural grass found on the prairie grows very short here, hay is therefore hard to obtain. The cultivated grasses here, as elsewhere, have not yet proved generally successful. Before reaching Westbourne (altitude 803), the country assumes a more grassy appearance. Very large herds of

cattle are seen all along the line for many miles. The country is well adapted to mixed farming and stock raising: it is park-like, and wood is plentiful in the bluffs, which are scattered over the country dividing the beautiful prairie stretches everywhere to be seen. Large grass marshes are south of the track, hay is abundant, easily procured, and of good quality. At Woodside (altitude 830 feet), larger timber than usual appears. The country here is more suitable for grass than grain. As we near Gladstone (altitude 855), at which there are two elevators, the land appears more suitable to grain growing. The settlers are well pleased with their location. Good crops of wheat, oats and barley are grown here, and the big hay marsh a little north, containing 50,000 acres, supplies an enormous amount of hay annually. West of Gladstone the land is sandy and poor, but affords some very fine gravel beds, which will be valuable for road-building in future years. The sandy soil continues to Arden (altitude 1,058 feet), though there was some fine looking fields of grain in the distance. As we near Nepawa (altitude 1,178 feet), the land improves, and the acreage in grain increases. This has become noted as a fine grain growing centre. The soil is good, warm, and well sheltered, and the prairie here is rolling. There is one elevator at Arden and two at Nepawa. Between here and Bridge Creek (altitude 1,572 feet, and at which there is one elevator), is a very suitable country for sheep raising. In this tract there are thousands of acres; it continues beyond Minnedosa, in fact, may be said to continue to the end of the line. The land around Bridge Creek and Minnedosa looked very promising, particularly at the latter place. Minnedosa is a most picturesque town, surrounded, especially to the north, by a very fine grain growing and stock raising country. It is the market town of a large district, including the prosperous Clan-William settlement to the north. The altitude of the town is 1,641 feet. It has three large elevators, a grist mill, and all necessary business places. At this place we met several farmers who live twenty-five to sixty miles north of Minnedosa; they give a splendid report of the country, especially those coming from the Dauphin Lake settlement, sixty miles north. The same general character of the soil continues up to Binsgarth and Russell, which was the extent of our journey in this direction. It may be generally described as a gently rolling prairie, dotted here and there with more or less copse wood, or bluffs as they are called here. The soil is generally a rich mould, overlying a deep and rich clay subsoil, which is generally intermixed with limestone gravel. Some sections have lighter subsoils; in fact, the most fastidious can be pleased in regard to the quality of the soil. At Shoal Lake grazing and dairying are carried on extensively, of which we will give an account in a future issue. The altitude of the various towns not heretofore given, are as follows:—Basswood, 1,921 feet; Newdale, 1,947 feet, which is the greatest elevation in Manitoba, being 347 feet higher than Riding Mountains; Strathclair, 1,875 feet; Shoal Lake, 1,783 feet; Kellor, 1,786; Solsgrith, 1,761 feet; Fox Warren, 1,715 feet; Binsgarth, 1,685 feet; Russell, 1,803 feet; Birtle, 1,675 feet. At each of the above places there is an elevator, except at Birtle, where there are two. This is a pretty town, situated on Birdtail Creek, about 137 miles northwest of "Portage." From 2,000,000 to 5,000,000 feet of spruce logs are annually floated down the creek, to be sawn at Birtle and Brandon. Cordwood is also floated down in abundance. The valley in which the town is built contains a great quantity of building stone, which is found to a certain extent in the ravines and hillsides which accompany every rivulet or river in this section. South of Birtle there is a very large plain, having generally a sandy subsoil. The surface soil is also more or less sandy, but in any other direction the land is heavy and good; the grain here presents a very luxuriant appearance. The residents of this town are the most public-spirited and patriotic of any we have met on this line, especially worthy of mention are Mr. Mickle, M. P. P., and Mr. John Crawford, Mayor of the town. These gentlemen are well posted concerning the lands throughout the whole Province, and are willing

to assist all settlers in making a selection. We would particularly recommend Mr. Mickle in this particular, as implicit confidence may be placed in him. He is highly respected throughout the Province for his intelligence and honor. Near Binsgarth is situated the famous Binsgarth farm, of which Mr. G. L. Smellie is manager. They keep about 260 head of Shorthorns, as well as a large flock of Shropshires. In a future issue we will give a review of this establishment. Mr. S. is a very capable manager. A few miles beyond Binsgarth, at Russell, Dr. Barnardo has a farm of 7,000 acres, of which E. L. Struthers is manager. The soil is a sandy loam, with a clay subsoil. The Assiniboine River passes through it. Thirty thousand dollars has already been spent in improvements, and \$20,000 in outfit. Two hundred and thirty acres are in grain this year, of which fifty acres are in wheat. The stock comprises 100 cattle, 9 horses and 18 Leicester sheep, which the manager wishes to increase to a large flock. He contemplates keeping 1,000 acres in crop, but will make all contribute to dairy purposes. Seventy-five cows are now milked, and he hopes to obtain the cream from 225 others owned by settlers. Butter-making will be the specialty. The creamery will be run summer and winter.

The following evidence is taken from actual settlers:—

Mr. Joseph Lowery, formerly a resident of Simcoe, Ont., now of Clan-William, where he settled eleven years ago, says he is much pleased with the country. Farmers are doing well, though the grain is more or less frozen every year, which is due to it not being sown early enough, nor put in well enough. He has had his grain frozen twice in eight years, but only partially injured. In both cases it graded No. 1 frozen; average price realized, 55c.; average yield for eight years, wheat, 30 bushels; barley, 40 bushels (the latter never being frozen, and of fine quality); oats, 50 to 100 bushels. He says stock does pretty well, especially sheep. The same quantity of ground will not pasture more than half as much stock here as it would in Ontario. A man with limited means can succeed better here than in Ontario. He likes the climate well. Young stock frequently winter out, running about the straw stacks; but they would do better if housed. Clovers and cultivated grasses do not generally succeed, but the native grass is very nutritious, and especially adapted to cattle.

A. Malcome came to Gladstone in 1877, where he remained for four years. He claims the frost was not so destructive there as in Minnedosa, where he is now located. Was not troubled with frost while in Gladstone, but has been frozen more or less two-thirds of the time since leaving there. Two years out of eight, the time he has lived at his present home, wheat has been a total failure with him, but farther to the north at Clan-William, they have never had a complete failure. He gives his average yields per acre since coming to the country, frozen years included, as follows: Wheat, 20 bushels; barley, 40 to 60 bushels; oats, 60 bushels. Stock does remarkably well. He keeps a dairy of 30 to 40 cows, the milk of which he makes into cheese, and has a good demand for all he can produce. He received eleven cents all around for the make of 1887, and ten cents for that made in 1888. His total cash receipts for the make of 1888 were \$1,502.85.

Mr. R. R. Ross, Rosburn, twenty-five miles north of Birtle, came from Ontario to his present home in 1879; he has now 640 acres, of which 180 are in crop. Of live stock, he has thirty-five cattle and five horses. During the period of his residence in Manitoba, his wheat has averaged twenty-five bushels per acre, excepting last year, when it did not average five bushels. Average price, fifty cents. Barley, forty bushels; this is a safe crop and does well. Oats, fifty to sixty bushels. With him the native grass will cut two tons per acre, and is very nutritious. Out of twenty Ontario men who came to his settlement, all are doing well, have comfortable houses, and are in easy circumstances. Some are becoming wealthy. Practical working farmers always succeed. They have a little frost yearly. Clovers and cultivated grasses have not been generally a success, though he has a small plot of white clover.

Stock.**Chatty Letter from the States.**

[From our Chicago Correspondent.]

The best 1,400 @ 700-lb. native heaves have been selling at about \$3.90 to \$4.15, with good 1,100 @ 1,400-lb. steers at \$4.20 to \$4.30.

Native cows sold during July at \$1.50 to \$3.25; store cattle at \$2.20 to \$3.20. The slop feeders bought freely of 950-lb. steers at about \$2.60 to \$2.75.

Comparative prices for hogs for several years past, at this season, are shown below:—

Date.	Mixed 200 @ 240 lbs. Average.	Heavy 250 @ 400 lbs. Average.	Light 140 @ 200 lbs. Average.
1889	\$4.20 @ \$4.25	\$4.15 @ \$4.35	\$4.35 @ \$4.65
1888	5.50 @ 5.90	5.90 @ 6.00	5.55 @ 5.90
1887	5.40 @ 5.65	5.50 @ 5.75	5.35 @ 5.65
1886	4.45 @ 5.00	4.75 @ 5.15	4.40 @ 5.00
1885	4.00 @ 4.30	4.25 @ 4.50	4.25 @ 4.70
1884	5.00 @ 5.25	5.30 @ 5.65	5.00 @ 5.30
1883	5.20 @ 5.60	5.55 @ 6.00	5.65 @ 6.25
1882	7.35 @ 8.05	8.10 @ 8.75	7.40 @ 8.10
1881	5.90 @ 6.30	6.25 @ 6.75	6.00 @ 6.50

From the above it will be seen that hogs, as well as cattle, are a good deal lower than five or six years ago.

The receipts of cattle at Chicago for the year are about 200,000 head larger than in 1888. The receipts have consisted chiefly of good, heavy cattle. Texas rangers have not been marketed so freely as last year; and it is claimed that the crop of grass cattle from the far west will also show a shortage. These predictions, however, are not very reliable; they come mainly from interested parties.

For many months the rainfall in Texas has been so great that neither live stock nor crops have done well. In the coast country south of San Antonio cattle are in some cases wading in water trying to find grass, while the cotton crop has already been seriously damaged by exposure to rain. The northern range country in Montana and Wyoming is still too dry.

The writer has just returned from a trip through Kansas and Colorado. Beyond the "rain belt" in Kansas, and in the entire State of Colorado, farmers are dependent upon their irrigating canals and ditches. Perhaps it might be said that they are independent of rain fall, for when the work of constructing good irrigating canals and ditches is done, farmers can easily turn the water upon their crops or withhold it as seems best.

The great crop of crops in that western country is alfalfa, or lucerne, as it used to be called in the older British works on agriculture.

Mining has made Colorado, and is still the chief industry; but farming, with alfalfa growing for a basis, is said to be rapidly taking second place, leaving cattle raising behind.

Old fashioned cattle raising on free Government lands in that State is out of date. The great cattle trail from Texas to the northern ranges is also closed, never to be opened. The railroads, however, are getting the benefit. Formerly cattle were started on the trail early in the spring, arriving at their destination late in the fall, sometimes very thin, and in bad condition. Now they are taken out of their pastures in good condition, put on cars, and landed at the northern grazing grounds before they have had time to run down in flesh. This ought to make a great difference in winter losses, as the greatest losses have always been among the southern cattle recently arrived from their long and tedi-

ous drive. With whom "the wish is father to the thought," the claim is again made, that many western ranchmen will only ship a part of their cattle if prices do not improve. We have heard this for several years past, but it may be that owners are now in better condition to be independent than heretofore.

Some successful cattlemen, who have been out of the ranch business since 1883, have recently re-invested, showing returning confidence in the business.

Sheep Killing Dogs a Great Hindrance to Agricultural Progress.

BY D. NICOL.

To account for the present depressed state of agriculture in Ontario, there are some causes for which the farmers have no remedies within their power. They cannot make the rains come just when they are most needed, neither can they avert a deluge; but that this very serious hindrance to the progress of agriculture has been so long endured is almost entirely the fault of the farmers themselves. There are comparatively few farmers in Ontario who have not in some measure suffered loss by other people's dogs.

Mr. Dryden, in his article on sheep, in the last number of the *Advocate*, speaks of a large area of country north and east of Kingston as being remarkably well suited for sheep husbandry, and wonders what can be the reason so few sheep are raised there. I know that part of the country, and what its capabilities are. I also know the people, and somewhat how most of them are circumstanced. In many cases there may be, as Mr. Dryden supposes, a deplorable lack of enterprise; but the majority of the most enterprising farmers of that country are quite well aware that sheep-raising would be the most profitable business they could engage in on their farms were it not the fact that it is unsafe. If Mr. Dryden were to ask each individual farmer in the districts mentioned, "Why do you not raise sheep?" I venture to say that in nine cases out of ten, the reply he would receive would be, "Because of sheep-killing dogs."

Two years ago an enterprising young farmer, who was desirous of investing his capital exclusively in the business of sheep-raising in the County of Frontenac, with a view of being convenient to the American market, asked my advice on the matter. I told him that unless protection from dogs could be obtained he would find it a very unsafe speculation, and the many ravages on flocks since that time has more than justified the conclusion. Three weeks ago one flock of Southdowns was one night left out of the fold. The result was six sheep killed and several others badly worried. Since then four other flocks in this neighborhood have been attacked, and a great deal of damage done. In only one instance has the sufferer been able to collect anything for damages. In another instance the guilty dog was discovered, but as the dog was the owner's only personal property, remuneration was simply out of the question.

Frontenac County is not by any means an exception in regard to this evil. All the counties to the east, and many to the west of us are infested, and suffer nearly equally from the same cause.

Now, this is an evil which the farmers can, if they wish, have remedied by legislative enactment; the more easily, because there can be no ground for introducing party politics into the question. The Ontario farmers are very nearly united in opinion regarding the threatened Jesuit aggression. Will they not unite to dispel this existing torment, which can be done without making any one the worse off? I do

not mean that every dog in the Province should at once be killed, because it may be that in some instances dogs are of some use, although I am not aware of any such. I know that the butchers and drovers are now very generally agreed that dogs for their purpose do more harm than good, because of the difficulty in getting assistants who can prevent the dogs from harassing and annoying the animals being driven.

I would not try to deprive the city lady of the pleasure of leading around with a string her blanketed little pure-bred poodle. Sheep raisers have no need to dread that class of dogs. The great majority of dogs kept in Canadian cities, towns and villages are despicable mongrels, large enough to worry sheep, and are utterly worthless for any good purpose. They lie around home during the day time, and prow around the country during the night. They are now more to be dreaded than formerly was the wolf, the lynx, or the bear. On many farms, dogs of this class are kept, and although they are seldom known to attack their owner's sheep, they will travel many miles to get a favorable opportunity on some other farm, and should be dealt with as wild animals.

Every farmer is now required to take care of his bulls, boars and rams, and to see that they do not injure or destroy their neighbor's property, or in anyway hinder their neighbor's progress in their chosen branch of husbandry, yet in some districts if they were altogether allowed their freedom, the evil would not be as great as that of dogs under the existing laws.

It is hardly probable that every farmer in Ontario would engage in sheep husbandry, even if they were protected from the ravages of depre-dating dogs; but many, whose farms are better adapted for sheep raising than for anything else, would then be enabled to make a livelihood. It is very unfair that they should be prevented from making the best of their farms by others who have no interest in such matters.

It is contrary to the golden rule—"Do unto others as ye would they should do unto you." It is high time for the Government to amend the laws regarding dogs. At Farmer's Institute meetings many subjects of far less importance have been freely discussed; therefore I would recommend the following text for deliberate consideration at every Farmer's Institute meeting to be held next fall and winter throughout the Province:—

"Would legislative enactment requiring every dog owner to take care that his dog or dogs do not kill or injure his neighbor's sheep, be for the best interests of the farming community?"

If the tax on dogs were made compulsory, it would mitigate the evil in some degree, but it would not by any means be an efficient remedy.

Every dog should be chained, kenneled or otherwise confined during the night time, and every unmuzzled dog found at any time away from his home, not in charge of some person, should be taken dead or alive, and the owner prosecuted for allowing his dog or dogs to go at large. This would be on the principal of equal rights. It is the law in all large cities in Europe. It is a law that can justly be demanded by the sheep raisers of Ontario.

Mutual Live Stock Insurance Association of Ontario.

The above Association was recently organized, with Mr. Jno. McMillan, M. P., of Constance, Ont., as President, Jno. Avery, Clinton, as Secretary, and Mr. N. Y. McLean, of Seaforth, as Treasurer. The following gentlemen are Directors:—Alex. Innes, W. D. Sorby, D. D. Wilson, D. McIntosh, Jno. Beattie, A. Bishop, R. Beith, Thos. Evans, Idington McLaughlin, Bissitt, Meyer, Graham, Blackwell, Moore.

A correspondent of the Country Gentlemen, calling attention to the statement of a speaker at a meeting of the board of agriculture who said that he could make butter at a cost of ten cents a pound for feed, says: "Farming of this kind pays well, and one great reason why it does not pay in so many instances is that so many men do not put enough faith in their business to cause them to put more money, labor and brains in it."

Elmhurst Farm.

This excellent farm is situated on the west side of the London Road, one mile south of Clinton, Ont., in the county of Huron. This county is noted for the excellence of its soil, and in no part is it superior to this locality. The proprietor, Mr. W. J. Biggins, is a native of Yorkshire, England. At eighteen years of age, he accompanied his father to Morrow Co., Ohio, and at thirty came to Canada, and purchased Elmhurst Farm, where he has resided ever since, about thirty years. Mr. B. attended college with Messrs. Jno. B. and Wm. Booth, of Killarby, whose grandfather founded the famous Booth strain of Shorthorns. Reared in the home of these famous cattle, Mr. B. has always been an admirer of them. The subject of our

first prize herd, and at the North Western Exhibition where she has won first in her class, and diploma for the best female of any age for the past two years. The Elmhurst herd numbers fifteen. Matchless 19th, who is now fifteen years old, bred by Mr. James I. Davidson, of Balsam, Ont., was purchased from Mr. Hugh Thomson, of St. Marys, at two years old, having a heifer calf at foot, which was sold at three years old to Messrs. Watt, of Salem (along with four others of the same family), and won most of the principal prizes in Canada for two years in succession. Matchless 19th has had eleven calves, most of them prize winners, and she is due to calve again in the fall. Imported Red Rose, a four-year-old cow, bred by Mr. E. Cruickshank, of Lethenty, Aberdeen, Scotland, is a very fine animal, she

Royal Elmhurst, Edna =14658=, a Gwynne, Isabella Broughton, a three-year-old roan, a descendant of Imported Isabella, by Dipthong 3rd (21347), are specially fine animals, and worthy of a place in any herd.

Pure Bred Stock.

Phil. Thrifton, in Jersey Bulletin, says:—To have said ten years ago that every farmer ought to keep only pure bred stock, each the best of its kind, would have sounded to most people like theoretical nonsense. There are now, however, many good farmers who believe in having about them no other than pure bred stock. The idea that such animals require better feed and shelter than common or mixed stock amounts to nothing as an argument in favor of the latter. Good



Matchless of Elmhurst 6th = 7134.

THE PROPERTY OF MR. W. J. BIGGINS, CLINTON, ONT., CANADA.

illustration, Matchless of Elmhurst 6th = 7134 = is his property, having been bred by him. This grand cow is now six years of age; she was sired by British Statesmen 2nd = 1467 =, bred by Messrs. Russell, of Richmond Hill; he by British Statesmen (42847), and his dam was from Isabella of gold medal fame at the Centennial. The dam of Matchless of Elmhurst 6th was Matchless 19th, sired by imported Statesmen (32609), a noted prize winner in Canada and the United States. She has raised five calves, two heifers and three bulls, one of them now at foot, six weeks old. The bull calves have all been prize winners. She was a prize winner at the Western Fair; last fall, and at the Central Fair, Clinton, she took first prize in her class, and also first for best female of any age, which she has done for four years in succession. She was also, in the

won 2nd at the Provincial Exhibition, Ottawa, in 1887, and 2nd as a three-year-old at the Western Fair, London, last fall. She was sired by Perfection (37185), and her dam, The Rose, was a winner at Bamfshire and other shows in Scotland. She has a heifer calf at foot, by Imported Excelsior (51233). The present stock bull at Elmhurst. Excelsior is a grand bull, has great substance, fine top and underline; and, although in only fair condition, is very smooth and thick fleshed. His fore-rib is equal to any. Village Flirt, a roan three-year old, bred by S. Bristowe, Rob Roy, Ont., especially attracted our attention. On inquiry we found she was sired by Sir Arthur Ingram = 3874 =, of Bow Park fame. But space forbids the enumeration of all the excellent animals of Elmhurst. Matchless of Elmhurst 10th, a fine roan two-year-old, by

feed and shelter pay well in either case, but always best when given the best stock.

It can hardly be said that this experience or belief has yet become very general among our farmers, and perhaps it is not best to insist strongly, in every locality on its adoption and practice. Example is the best persuasive in matters of this kind, and good work is silently and surely being done by the example of the most successful stock breeders and farmers in every part of the country.

Wherever the farmer finds that he cannot afford to tend a large corn crop with a single horse plow, then will he also find that he cannot profitably keep any other than the best bred stock within his ability to buy, whether sheep, hogs, cattle or horses. Everything to its special use, and the best of its kind, is fast becoming the order of the day.

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Dominion Sheep Breeders' Association.

This Association will hold its next meeting in the City of London on some evening of the week of the Provincial Fair. Through the absence of the secretary in the North-west, the date has not been definitely arranged, but will be announced in the next issue of the *ADVOCATE*. Programme as follows:—

Paper on the Proper Classification of Sheep at Fairs.—By J.C. Snell, Edmonton.

The Value of the Sile and Soiling Crops for Sheep.—By John S. Pearson, London.

The Proper Method of Getting up Fleeces for Market.—Jno. Hallman, Wool Merchant, Toronto.

What a Canadian Sheep-raiser Can Learn in England.

Hon. Chas. Drury is expected to be present and give an address. Others have promised to assist in the programme, but we have been unable to learn the subject on which they will write or speak. Full programme and date in next issue.

Driven Out by Dogs.

During the last thirty years a "National Stockman" correspondent has had many sheep destroyed by dogs—most of them not killed outright, or even mangled, but the life literally frightened out of them. Referring to this indirect but most important source of loss, and to other related points, he says:

"Sheep are very nervous and can be scared to death easily, especially if fat. Any person who handles sheep knows how hard a sheep's heart will beat when chased by dogs. Heavy sheep often drop dead without a mark on them. Dogs kill sheep to satisfy hunger, but one sheep would do that. The taste of blood and excitement keep them at it long after hunger is satisfied. Half of all the killing done on my farm was by hounds; the other half by all sorts of curs. An expert dog will always catch by the throat close to the jaw. I have seen scores of sheep killed, and not a mouthful eaten. Two dogs will kill from one to fifty sheep in one night. It is not often that one dog goes at it alone. The first time a flock of sheep is worried by dogs, they lose one-half of their value; the next time the other half. We have no sheep here. When I say we, I mean three townships. The dog drove them out. Men who do not half feed or clothe their children will keep two poor dogs. They will hunt and 'set the dog where he the lambs may get.' The owners of dogs are responsible for all damages they may do, just the same as if it were done by a horse or a cow. But the trouble is a dogman has no property but dogs and children, so the sheepman has to bear the loss. This is a grievous wrong, and calls loudly for 'prohibition' of the dog nuisance. Not one dog in every thousand pays his keep, while the damage runs into millions of dollars."

Statistician Dodge, of the Department of Agriculture, estimates that the county loses 5,000,000 sheep annually, mostly on account of dogs.

A system of pressing bran into cakes, thus reducing the bulk four-fifths, has been patented in the United States. This should prove mutually beneficial to feeders and millers, as it can be transported much more cheaply than by the old methods.

The bill to establish a department of agriculture, with a minister of agriculture in charge, in England, is making satisfactory progress, and no doubt before the end of the present session, the new department will be fully equipped, so says the *Agricultural Gazette*.

[Papers Read Before the Holstein Breeders' Association, at Guelph, March 12, 1889.]

What the Future of the Holstein Shall be in Canada.

BY F. C. STEVENSON, ANCASTER, ONT.

Mr. President and Gentlemen:—In attempting to foretell what shall be the future of anything, we must necessarily be guided to a great extent by the past. In the first place, let us take a hurried glance at the origin of the Holstein-Friesian race of cattle, noting the prosperity of the people of the country where the cattle originated, and where they have been kept in nearly absolute purity of breeding for nearly 200 years.

The Holstein-Friesian cattle, as they are now called, originated in the Lowlands of Holland, in what at present are the provinces of North Holland and Friesland. The Friesians, who settled Holland about 200 years ago, owned large herds of these cattle; and the extra care they gave them during winter, coupled with the abundant pasturage of the Lowlands during summer, had a favorable effect, and their cattle soon excelled those of all the surrounding countries. Step by step the black and white cattle advanced until they reached the high point of excellence at which they now stand. The history of Holland shows that the revenue derived from dairy produce exceeds that derived from all other sources combined, and also exceeds in value that of any other country in the world. These facts, I think, prove to us that the dairy interests of Holland are of immense value, and have become so from the excellence of their products, which are derived from and founded on the excellence of their cattle. The first importation to America of which there are now any descendants, was made in the year 1861, since which time numerous importations have been made and large numbers bred. The American breeders having, as a rule, a better knowledge of the art of breeding than their Dutch predecessors, have succeeded in improving the breed, especially as regards the butter-producing qualities of their milk. And I believe that, as a class, the Holsteins of America are to-day better than those of Holland. Many enormous records have been made in the United States by the Holstein cow during the last three or four years; and these appear to be continually increasing; and the end is not yet, provided good judgment is used in selecting and breeding.

In the production of butter the Holstein has gained great proficiency. I believe that the largest average weekly record of butter yield for a herd of over twenty cows has been made by Holsteins, and I can name one herd that last year had 100 cows and heifers, that averaged 18 lbs. of butter in a week. This, I think, is the best evidence of the capacity of the breed, especially when you consider that it is only within the last few years that breeders have been trying to develop the butter-producing qualities of their herds.

As to the future of the Holstein in Canada, judging from what she has done in the past, I fail to see how anyone can doubt but what she is the coming cow for the dairyman, and also the general farmer of Canada. If we look for a moment at the extraordinary popularity that this breed has attained in the United States within a few years, among all classes of farmers, except perhaps, the beef raisers, there seems no reason to doubt but that the breed must become equally popular here in Canada, as the conditions are almost similar. But in order that the Holstein may fill the place in Canada that she is capable of, the breeders must do their share. It will not do for us to sit down and say we have the best dairy cow in the world. We must give the public some proof that the Holstein is superior, not only individually but as a breed, to both the Jersey and the Ayrshire as a dairy cow, and as an all-round breed for the general farmer is superior to all others.

In order to do this it will be necessary for us to substantiate our claims by careful and actual tests, more especially for butter; and to the attainment of this end every breeder should make an especial effort, not only with his thoroughbreds but also with grades. We should by all means strive to elevate the standard of breeding. Endeavor to place at the head of your herd a bull of the true dairy type of Holstein. Do not sacrifice the milk and butter farm to the beef farm, as some breeders in the United States are doing, as we have beef breeds now that can hardly be improved on.

In conclusion, I would like to urge the breeders who have the future of the Holstein in Canada in their hands, to do their utmost to place them where they should be.

The Quality of Holstein Milk.

BY E. D. SMITH, CHURCHVILLE, ONT.

In the Province of Ontario there has been a good increase in the number of cheese factories and creameries, of late years, and private dairies are beginning to do a better and more profitable work; so that the dairying business now presents a future full of brightest hopes. The wide-awake farmer, alive to his own interests, sees the two-fold advantage of the dairy cow—a good profit from her milk, and an enriching of the soil. Hence it is very important that we as farmers, breeders or dairymen, should carefully inquire into the merits of the different breeds, and select that breed which approaches most nearly perfection as a dairy animal.

After due consideration and study of the breeds, I am strongly of the opinion that the Holstein stands far ahead of all others as the most useful and most profitable dairy cow. Too much cannot be said in favor of the dairy qualities of this noble breed. It is not my intention, however, to speak of all the noble and good qualities of these cattle, but I will confine myself to a few remarks on the quality of their milk.

In the first place I will endeavor to find out how rich the milk of the average Canadian dairy cow is, and then compare this with that of the Holstein.

From the report of the Bureau of Industries for 1886, I learn that there were 31 creameries in Ontario, and that they required on an average 26 lbs. of milk to make one lb. of butter; in 1887 they required 25.1 lbs. This milk was obtained from grade, Ayrshires, Jerseys, Devons, Shorthorns and other breeds, and it may justly be considered a fair and average sample of milk for the Province of Ontario. In comparing Holstein milk with this, I feel confident that I can show that the former is at least from 10 to 15 per cent. better for butter or cheese.

In Ontario there are no creameries supplied exclusively with Holstein milk, so that it will be necessary to go to private dairies to get the requisite reliable information. I will, therefore, go to a few of the largest and best herds in America, and give the results of their tests. A very large percentage of the Holsteins in Ontario come from the herds from which I am about to quote. Smiths, Powell & Lamb have kept a careful and accurate account of the tests made by them. They had, in 1888, one hundred cows and heifers in their herd that averaged over 18½ lbs. of butter in seven days. It required 19 lbs. of milk on an average to make one pound of butter.

T. G. Yeomans & Son have kept similar accounts from a smaller herd, but a good one. They had in 1888, nine 2-year-old heifers that averaged 12 lbs. 13½ ozs. of butter in seven days; four 3-year-olds that averaged 17 lbs. 6½ ozs. in a week, and fifteen 4-year-olds that averaged 20 lbs. 12.8 ozs. in seven days; 38 cows (including 17 2-year-olds) have averaged one pound of butter from 21.3 lbs. of milk.

Thomas B. Wales had six 2-year-olds that averaged 16 lbs. 5 ozs. of butter in seven days, and six over two years of age that averaged 24

lbs. 2 ozs. of butter in a week. Twenty cows and heifers of his herd averaged one pound of butter from 18½ lbs. of milk.

The Home Farm Fine Stock Company tested 10 head in 1888, that consisted mostly of heifers, and they averaged 17 lbs. 13-10 ozs. of butter in seven days, taking on an average 20.62 lbs. of milk to make a pound of butter.

I might also quote similar results from B. B. Lord & Son, Dallas B. Whipple, F. C. Stevens, and many other noted breeders who have cows that have made wonderful records; but I have quoted enough to show what the breed, as a breed, is capable of doing. Taking the 168 head just quoted, I find that they required on an average less than 20 lbs. of milk to make a pound of butter.

The average Canadian dairy cow required from 25 to 26 lbs. of milk to make a pound of butter, as previously shown; the Holstein requires less than 20 lbs., or a difference of over 27 per cent. Some allowance should be made for better attendance and feed, and that the herds quoted were above the average of that breed. Most of our Ontario Holsteins are descended from these herds, and, consequently, must approach the richness of those quoted. Allowing one-half this percentage for better feed and attendance, and the herds being above the average, the Holstein milk is still 13½ per cent. richer in butter than that of the average dairy cow of Ontario.

Many writers on butter and cheese say that the amount of butter fat and casein in milk is very nearly the same; and from reports of the analysis of milk I have noticed, the difference was small. Such being the case, I can safely draw the conclusion that the casein, or cheese-forming material, in Holstein milk is like the butter—13½ per cent. better than the average Ontario dairy cow. Thus it is seen that the milk of Holstein cows is of excellent quality in the most useful ingredients.

The Holstein the Farmer's Most Useful Dairy Cow.

BY A. C. HALLMAN, NEW DURHAM.

As the object of this meeting is to bring the valuable properties of this most popular breed more prominently before the public, to gain friends who for various reasons have failed to become acquainted with their great excellence as a dairy breed, and showing good reasons for the popularity thus gained.

In order to fully impress the reasons why they have attained such great excellence, and that it is not only a mere matter of chance to be possessor of their rare qualities, it will be necessary to take a hurried glance at their origin. "History shows that Holland, the home of this great breed, receives more value for its dairy product than any other country in the world, and that the dairy interests are very large, of great value to the country, and have become so only by its products, which are derived from, and founded on, the excellence and uniformity of their cattle, having been bred and improved by careful selection for that purpose for upwards of 2,000 years." We find the Hollander is exceedingly industrious, frugal and practical, but not scientific. He has known no other way to get a good cow than to use the bulls and raise the heifers from the best cows he already had; but this method he practiced very faithfully. Having a good heifer, he made a good cow by giving her plenty to eat. Holland's magnificent pastures are the special feature tended to develop the black and white cattle into what they are; and there, where good pastures are found, Holstein-Friesians stand the best chance of a favorable reception and further development. But some say we cannot import those Holland pastures and rich meadows. This is very true; but we have sufficient natural resources for them to do well. The climate and

soil is favorable for excellent pastures; and where this is not so, green corn, oats and peas, rye and roots, take the place; and Holsteins need not be a failure here. Even where pastures are excellent the above-named crops should be raised when pasture fails.

The Holstein-Friesian cow, as we know her, is only the natural result of favorable soil and climate, supplemented by ages of careful selection and faithful care; and it is just as natural for a Holstein to make wonderful performances at the pail and churn, far beyond all competitors, as it is for a race horse to distance the "Draft" on the turf. Having been bred and reared for so many centuries, it is natural for them, and they cannot help it if they get proper care and attention. They are an improved milking machine, to transform feed into milk and butter; and the dairyman's aim should be to have the greatest amount of feed transferred into milk and butter with as little waste as possible. That the Holstein-Friesian stands head and shoulders above any other breed in the dairy line, is settled beyond all doubt with those who have had the pleasure of handling them. These are not merely assertions, but facts which have already been proven by actual tests for milk, butter and cheese. They are not so far behind in the production of beef, on which I shall not enlarge in this paper, although I might quote instances where they have distanced some of the most noted special-purpose breeders.

The Shorthorns were once the pride of the barnyard, and are a noble special-purpose breed. Had they been bred and reared with the same care and selection for dairy qualities as they have for beef, they would probably be the noblest race in the world. The heavy demand for beef and the keen competition in the show ring have almost destroyed their dairy qualities. If they raised a lusty calf which was sucking for from four to six months, was cared for, and the system, instead of being developed into a dairy form, developed into a beef form. There are instances where some cows give a reasonable quantity of milk, but they are very rare; and where there is one that does, there are a dozen that do not. I do not think it necessary to go over all the different breeds; they all have their admirers, and some good qualities, and those that like them should keep them if they find them profitable; but if they do not, give the Holstein-Friesian a trial, and you will not find them wanting. I might go on and give wonderful milk and butter records superior to any other breed in the world, but, seeing the programme before, I trust my other friends will fully convince you of the fact I have been dealing with. In nearly every competitive contest for milk and butter, both in quality and quantity, the Holsteins have come off first with flying colors, and have removed every doubt as to their great dairy qualities. At the Chicago Fat Stock and Dairy show; at the New York Dairy and Cattle show; at the Buffalo International Fair; at the Minnesota, the Iowa, the Ohio and the New York state fairs, the Holsteins have met all their rivals, and have routed them from every position they have attempted to hold; and today the Holstein breeders of America can honestly say, We have fought them, and the victory is ours.

In conclusion, I would say to all interested in general farming, give the Holstein a trial. You will find it the best investment on the farm.

The great danger of Canadian agriculture is the loss of fertility. Too much cropping, too little manure. Thus our soils become barren, our crops meager, and in the intense "struggle for existence" we go to the wall. What we most need—what we must have—is more fertilizers. The cheapest and by far the best fertilizer for the great majority of our farmers is barnyard manure. He who secures the most of this will win in the race. To secure this barnyard manure we must keep stock—cattle, sheep, hogs and horses—and the more the better.

Mr. Holmes, Sec'y Minn. Association, has a herd of dairy Shorthorns and is not in favor of any half-and-half business. If you breed for beef, he said, you must breed for beef; if for milk, it must be for milk exclusively.

Milk and Butter Production of the Holstein-Friesian Cow.

BY H. BOLLERT, CASSEL, ONT.

The Holstein-Friesian cow, as we have her to-day, is the product of the thrifty Dutch or Holland farmer, who has for generations—yes, I may say for hundreds of years—bred them with the object in view of producing an animal profitable to the dairyman and the general farmer. By looking over a herd of these animals you must acknowledge that they have accomplished it to a full extent, for the Holstein-Friesian is a perfect model of a dairy cow. Look at her and you will see a perfect wedge; she is fully developed in all points essential in the make-up of a model dairy cow, which is borne out by her wonderful performance at the pail and churn. Daily records of 60 to 70 lbs. are an ordinary occurrence, and very often 80, 90, and even over 100 lbs. are reached. Among the largest are: Mink, 96 lbs.; Trijntje, 95½; Rhoda, 96½; Hamming, 99; Etheka, 101; Pledge, 110½; Jamaica, 112; Pieterje 2nd, 112½, and Nerop, 116 lbs. in a day. These records are truly wonderful, and should convince the most sceptical of the superiority of the Holstein cow. When in 1872 Crown Princess made, under ordinary herd care, the wonderful record of 14,000 lbs. (by far the largest at that time), it astonished the dairy world, and was ridiculed by many; but this record, great as it was, has now been more than doubled, and it is my belief that the limit has not yet been reached, for it is almost impossible to foretell what these wonderful milking machines will yet do. Among the largest yearly records, we find Aaggie, with 18,004 lbs.; Princess of Wayn, over 20,000; Koningin van Friesland 3rd, over 23,000 lbs.; Clothilde, 26,021 lbs.; the great Pieterje 2nd, with the unprecedented record of 30,318½ lbs. Many two-year-old heifers have produced from 12,000 to 14,000 lbs. per year, and as high as 18,000 lbs. have been reached. The largest record ever made in Canada by any cow of any breed (so far as the writer is aware), was by the Holstein-Friesian cow, Glenburne, who in ten consecutive months, under unfavorable circumstances, produced 20,188½ lbs. Bonnie Queen, a four-year-old selected by the writer, last season produced nearly 10,000 lbs. in six months, under very unfavorable circumstances. Now, we will not judge the capacity of the breed by these few records I have given you, but by the production of whole herds. Messrs. Smiths, Powell & Lamb write in their catalogue in 1886:—"Our entire herd of mature cows averaged 17,166 lbs. 1 oz. in a year; 34 two-year-old heifers averaged 12,465 lbs. 7 ozs. These include all that finished their record during that year. The statistics of Ontario give the production of the average dairy cow as nearly 3,000 lbs. per season. What a contrast! But take even the very best dairies, who reach nearly 6,000 lbs., and compare them with the above records, and it must be convincing to all that, as a milk-producer, the Holstein-Friesian has no equal in the world.

As a profitable butter cow she is gaining a great reputation, and is rapidly coming to the front of all the so-called special butter breeds. It is only a short time that the breeders have paid much attention to their merits as butter producers; and with what glorious results, the following will show: Many are the cows that have made from 18 to 20 lbs. of well-worked, unsalted butter per week; and as high as 32 lbs. in seven days has been reached. Among the most remarkable are Netherland Princess 4th, who, as a two-year-old, produced 21 lbs. 10½ ozs. in seven days, and 80 lbs. 6 ozs. of well-worked, unsalted butter in 30 days; Imkjies Mercedes, at two years old, 21 lbs. 8 ozs. in seven days; Aaggie 2nd, as a five-year-old, produced 26 lbs. 7 ozs. in seven days, 105 lbs. 10½ ozs. in 30 days, 304 lbs. 5½ ozs. in 90 days, and during the same year made a milk record of 20,763 lbs. This record, for the same length of time, has never been equalled by any cow of any breed. One hundred cows, all in one herd, made an average of 18½ lbs. in a week; 57 cows of same herd

averaged 21 lbs. in a week; but these are only private tests, and are discredited by breeders of other breeds. But let us take a glance at the public tests, and see what position the Holstein-Friesian takes there. In 1883, competing for the Challenge Silver Cup offered by the Breeders' Gazette, of Chicago, for cow producing most butter in 30 days (competition open to all breeds and the world), the Holstein-Friesian cow Mercedes won, beating the celebrated Jersey cow, Mary Ann of St. Lambert. At Minnesota State Fair, 1886, all the prizes for producing most butter were won by Holstein cows. At the great New York Dairy and Cattle show in 1887 the Holsteins won 1st and 2nd prize for producing most butter in 24 hours (Jerseys and Guernseys competing). At the Ohio State Fair, 1887, the Holsteins won. At Iowa State Fair, 1888; at Bay State Fair, 1888; at Dakota Territory Fair, 1888, Holstein-Friesians won all first prizes; in every instance competing with the special butter breeds.

I could give you a great deal more such evidence; but let this be sufficient. These facts should be convincing; they clearly prove that as a profitable milk and butter-producer, the Holstein-Friesian cow stands unrivalled and alone.

The Royal Show for 1889.

(By Our Own Correspondent.)

This, the Jubilee Show of the Royal Agricultural Society, which marks its semi-centennial, was looked forward to as a very important event by lovers of improved stock especially, and great expectations were entertained as to its success. It has come and gone, and has undoubtedly proved to be all that was expected, and more. The time as well as the place of its being held were both interesting, and an extra effort was made to ensure the greatest live-stock show that has ever been held in Britain; and, now that it is over, and as it progressed, the opinion has been repeated by very many of those who have attended most of the shows of the Society since its inception that there never was such a show before, while many are rash enough to venture the prediction that there never will be such another till the Centenary Exhibition is held.

The vastness of the show is liable to have the effect at first sight, upon a mind not perfectly collected, of bewilderment; but to one who has resolved to be cool, and to study the arrangement and plans of the show-yard and its contents, it soon becomes clear that a master mind has been at the helm, and that method and system has been observed in all the details of arrangement; and a study of the map and plan provided in the catalogue of exhibits makes it comparatively plain sailing for the visitor.

The show was held in Windsor Park, and enclosed an area of 127 acres. This great Park is said to be twenty-one miles in circumference, and the show-yard is approached by the grand avenue of mighty elms more than two miles in length, which runs out from the front entrance of Windsor Castle. A more suitable place could hardly have been found, and considering that the buildings were all of a temporary character, it was wonderful what a happy effect was produced by these tasteful arrangements. They were generally of uniform size and appearance, all having double roofs covered with waterproof canvas, and, for a wonder for once, waterproofs were superfluous, as the weather was what is called Queen's weather in England, clear, bright, and warm as a Canadian summer week.

The catalogue of entries in this case, a bulky volume of over 450 pages, is a masterpiece of carefully prepared references, easily understood, and thoroughly reliable, sold for a shilling, with the officially corrected printed list of awards given free on the second day to those who have purchased the catalogues. Fortified with this guide to the show the visitor feels at home, without it he is considerably at sea. Of such paramount importance do we regard this adjunct to the show, the catalogue, that we are tempted to again enlarge upon its benefits; but having explained it at length, and urged its importance

in our notes of the Exeter Show, we forbear to repeat it, but content ourselves with the expression of a hope that our Canadian Fair managers may soon wake up to the importance and the real necessity of such a provision. A brief summary of the entries may be of interest, as showing the extent of the Exhibition, which, by the way, is not its most interesting feature, for, unlike our own shows, it is not usual to find any one exhibitor making more than half a dozen entries, and probably a majority of them have not more than two, and a very large proportion go up with their one best animal. The total entries of horses is 972; cattle, 1,637; sheep, 1,069; pigs, 265; poultry, 862—making the total head of stock on exhibition only thirty short of 5,000. To give an idea of the comparative entries of the different breeds we quote for the classes of horses:—Hunters, 258; Hackney, 148; Shire, 167; Clyde, 93; Coach, 57.—Of cattle—Shorthorns, 222; Hereford, 121; Jerseys, 434; Guernseys, 141; other breeds below 100 each. Of sheep—Shropshire, 212; South-down, 123; Oxford-down, 82; Cotswold, 60; Leicester, 41; Hampshire, 67. Pigs—All white breeds, 81; Berkshire, 96; other blacks and Tamworth, 88. The number of breeds of cattle and sheep represented is a surprise to the visitor. Of cattle there are fifteen distinct breeds.—Of sheep twenty-three, for all of which prizes of equal amount were offered and awarded. The breeds of pigs are only few in comparison, and are classified as large white, middle white, small white, Berkshire, any other black breed, and Tamworth, from which classification it will be observed that only two breeds, the Berkshire and the Tamworth, are necessarily pure breeds in order to compete, as any variation from the orthodox color in these would be fatal to their success in the awards of the judges. The Tamworth is a red breed, whose principal claim to favor is that they produce a large proportion of lean meat, a feature which no one would think of denying them, their long, flat forms, narrow visage and elongated snout being a safe index of their qualifications to fill the bill.

HORSES.

The most striking feature of the horse show in England, to a Canadian, is the superior excellence of the lighter classes, viz., thoroughbreds, hunters, Hackneys, cobs and coach horses. There are no prizes offered for thoroughbreds at this summer meeting of the Royal Agricultural Society, but at their Spring Show held in London annually, what are called Queen's premiums of £200 each (and which are supplemented by three premiums of £200 each by the Royal Commission on Horse Breeding), are offered for the three best stallions, whose owners agree to stand them for service for the season in one of seven districts designated by the Society. This gives the Society the distribution of the services of twenty-one first-class stallions for the improvement of the stock of the country, and it is stipulated that these twenty-one horses shall be on exhibition in one stable at the summer meeting of the Royal. This is a very interesting department of the show to horsemen. The horses in this stable average much larger than the thoroughbred stallion seen in Canada. They are really grand animals, and we could not but wish some one having the means would make the venture of taking some of them over to our country.

The classes of Hackneys and cobs are models of beauty in form and style, full of life and vim, easy, graceful movers, yet with good tempers, and evidently easily controlled. They are grand drivers on the smooth, hard roads of this country, are good feeders, with strong constitution and great endurance.

The Cleveland Bays and coach horses are classed together, an undesirable thing in our opinion, as they are of somewhat dissimilar type, a fact which evidently causes the judges much difficulty in coming to a decision. The Cleveland Bay as seen here in its purity, or at least as nearly so as it is possible to find them, is a magnificent type of a carriage horse. A perfect model of a horse for his purpose is Mr. Burdett-Coutts's Sultan at five years old, winner of the first prize, and the champion gold medal for best stallion in the class. He has won the first prize at the Royal for three years in succession, and is said to improve every year. His action leaves

nothing to be desired. His beautiful outline would please the most critical connoisseur, and, while his temper is perfect, he shows any amount of spirit and animation. "A rare one for a funeral," was the joking remark of his groom, as the model horse danced to the music of the band. The younger horses, and the mares and fillies of this class, showed fine character and breeding, and we wished again that Canada shared more of such.

Of the heavy horses at the Royal the Shires made very much the best show, both as to numbers and excellence. We had never so much noticed the difference in size and weight between the Shires and Clydes as on this occasion, the former being very much the larger, though we think the latter are large enough for anything; but for grandeur of appearance, for style and substance, combined with constitution and good bone, one could not but admire such splendid specimens as Lord Wantage's Prince William, by William the Conqueror, in his six-year-old form, and the equally notable Harold, by Lincolnshire Lad II., shown by Mr. A. C. Duncombe, of Ashbourne, Derby. Both of these have been champions at the London Shire Horse Show, and are considered a close match at any time, but by the grace of the judges, William has proved the conqueror at the Jubilee Show, and carries with him the champion gold medal.

Clydesdale stallions were not out in strong force, especially in the older classes, which is accounted for by the fact that the show is earlier this year than usual, and occurs in the middle of the Scottish season, so that the best horses could not leave their stands; but in the younger classes of stallions, and those of mares and fillies, the competition was strong, and the quality superb; and here, while we were somewhat disappointed in the size of the animals, we could not but admire the great improvement made in a few years in the quality of bone, and in the action, which in itself is power. Only three aged stallions appeared in the ring, but they were three capital horses, and Mr. David Riddell's Grand National, a black, foaled in 1835, a son of Young Lorne (997), out of Black Peggy, by Briton (94), was placed first, while the Duke of Portland's Macaulay (5187), a brown 4-year-old, with more style, was given second place, and Mr. Hodgson's Sir Hildebrand, of Belted Knight, came third. The strongest card, however, in the Clydesdale show, was the grand 3-year-old Prince of Albion (6178), by Prince of Wales (673), out of Mysie, by Darnley, a beautiful bay, shown by Mr. John Gilmour, of Leven, Fifeshire, which easily carried off the Queen's champion gold medal, and has thus made himself a record which may prove a veritable goldmine to his fortunate owner. In a long list of magnificent mares of matchless merit, the Sonnie "Sunrise," a bonnie bay three years old, by Darnley (222), dam by Old Times (579), shown by Mr. David Riddle, was decorated with the red, white and blue, as winner of the champion gold medal, as best female in her class, Mr. Gilmour's Primrose, another daughter of Darnley, and a grand one, having won second place in the section for 3-year-olds.

CATTLE.

The display of cattle at Windsor was simply immense. It was a full day's work to see them, even casually. To inspect and note each one individually, would be a week's work. There were over 1,600 on exhibition. To look across the sheds, which were all open above the height of the cattles' heads, was bewildering. There were miles and miles of sheds filled with cattle, representatives of fifteen distinct breeds; and there were few that were not first-class in their breed. The cosmopolitan Shorthorn comes first in the catalogue, and to these we pay our respects first. From the small entry of these at the earlier shows of the season, their friends were led to fear the representation at Windsor would not be strong in numbers; but two hundred and twenty-two entries by about one hundred exhibitors is a respectable turn-out, and one that speaks encouragingly for the present and the future of the breed—a contrast, truly, to the twenty-six which appeared at the first Royal Show, just fifty years ago. To attempt a criticism of only the prize animals in all the cattle classes, would take more space than we dare claim. To wade through

all the entries, would be a weariness to the flesh. We propose to glance at some of the stronger cards in some of the breeds in which Canadians are most interested. Of the nine aged bulls entered in the Shorthorn class, it was clear from the start that the five-year-old Mario, bred by Mr. Duthie, of Collynie, and sired by the famous Cruickshank bull, Field Marshall, now in service in Her Majesty the Queen's herd, would take first place, which he did easily; and he is worthy of the place, as he was at the last year's Royal. He is really a very good bull; big enough to weigh 2,600 pounds, and smooth and even in flesh-points, with great depth of ribs and fore-flanks; strong back and full crops. It is not often a better bull is seen, at even a Royal Show. His breeding is a combination of good blood on independent lines, a happy mixture of Booth, Bates and Cruickshank, a course of breeding which, when judiciously followed, will probably produce as many, if not more, prize winners than any other. Those who have watched the awards at the Royal Show for the last ten years, have noted with much interest the long line of success achieved by bulls having a preponderance of Booth blood, and especially of that branch of it which flowed from the Sheriff Hutton herd of the late Mr. Linton. The spell seems to have been broken in the last two years; and the north country blood has asserted its power, when wisely utilized, to produce winners; but in the disposition of the second prize in this class, at Windsor, the judges have again recognized the worth of Sheriff Hutton blood in producing Royal Ingram, the son of the famous Sir Arthur Ingram, who has had a fair share of honors in English show yards in the last two or three years. We do not, however, admire their taste; indeed, we think it could hardly have been a matter of taste with them. It must have been his strong, smooth, well-fleshed back which captivated them, for beyond that he has nothing to recommend him. He is light below, is deficient in style and a mean color, very much worse than white.

In giving Mr. Handley's McBeath third place here, the judges confirmed our opinion of him as compared with Rising Star, who was placed over him at Exeter, but goes without even a commendation here.

Three-year-old bulls were a good, strong class of eleven, with nothing especially notable, the first place being given to Mr. Barnes' light roan Prosperity, a strongly bred Booth bull.

There were twenty-nine two-year-old bulls, a large proportion of which were very meritorious, but there was no difficulty in deciding that Lord Poluarth's roan Ironclad of the Booth Waterloo family, a son of King Alfonso, and out of Wave Surf, should have first honors, though few, if any, outside the ring, thought so highly of him as to venture the opinion that he would be a strong claimant for the championship. His ribs and back are good, and his handling superb; but he is decidedly weak behind the shoulders and in fore flank, and is pinched around his tail-head.

Mr. Hewetson's white Royal Warrior was rightly awarded second prize, and Mr. Handley's roan Collynie-bred Lord Frederick, by Cupbearer, made a capital third.

The yearling bulls constituted probably the most interesting ring in the class, there being fifty-nine entries, and all filed an appearance. Here was a task for the judges; but they were equal for it, and in a surprisingly short time made a selection, which was generally satisfactory, and probably as nearly right as any other three men would have done. Three wealthy roans were honored and decorated with the rosettes, the first going to the Queen's New Year's Gift, the second to Mr. Dean Willis' Sir Douglas, and third to Mr. Thomas Willis' Heir of Windsor, of the Caperby herd, a son of Royalist, a strongly Booth pedigree; and but for his four months want of age, as compared with the first-prize bull, would have been a more dangerous competitor. For quality of flesh and hair, and form now, and for promise for the future, he is our favorite.

The contest for the championship, it was generally supposed, lay between Mario and the Queen's yearling; and it was a genuine surprise when the coveted honor was given to Lord

Poluarth's Ironclad. There seemed to be no disposition to accuse the judges of bias, or partiality; no one doubted their honesty, yet, very many were satisfied that the worst bull of the three was awarded the highest place, and probably the majority of the on-lookers would have given it to Mario.

The females in this class, taken as a whole, were a very worthy company; yet, there were only few, as there are only few in any class of stock, that so completely fill the bill as to be called phenomenal. However, it is just as true that there were very few that were not first-class; very few which, at a local show, would not be considered extraordinary.

The remarkable success achieved by Mr. Thompson, of Pentith, at the Royal Show last year, with his Shorthorn females, was nearly repeated this year, as we find him winning first-prize again with his grand roan five-year-old cow Molly Millicent, champion of last year, by Beau Benedict, a grand specimen of a useful cow; deep, square and massive, with a gentle face, and an udder which, for size and shape, would delight the eyes of a dairyman. The same owner gets second prize with Inglewood Gem, who was first at the Royal last year as a three-year-old, and is of the same family as the first-prize cow.

Mr. Thompson comes in first again in the three-year-old class with Belle Madeline, by Beau Benedict, the Belle of the Ball, as she justly wins the £50 championship as the best female. The £50 championship given by the Shorthorn Society to the breeder, and also the Queen's gold medal for the best Shorthorn in the yard, making her total winnings at this show £120, or \$600 in cash, besides the gold medal.

The Herefords, when they are well brought out, always make a grand showing; and here they were brought out to perfection. They seem to be more nearly all good than any other breed at the shows, and the best specimens at the Royal are really marvelous productions of beef animals.

The famous old bull Maidstone, very large, yet very smooth, was awarded first prize and the championship, but we could not see that he had much to boast of over his grand competitors Radnor Boy and Rare Sovereign in the aged class, while for the championship we should rather have favored the magnificent first prize two-year-old Favorite, and he had a very strong rival in Earl of Coventry's White Boy. The gem of the class, however, was the matchless cow Rosewater, by Rare Sovereign, winner of the championship for best female, and the Queen's gold medal for the best Hereford in the yard. She is one of the most marvelous specimens of a Hereford that ever stood in a show ring.

All the other beef breeds were strongly represented.—The Devons and the Sussex, breeds of very similar type, being all red, all smooth, and full of symmetry and quality, were out in strong force. Aberdeen Angus and Red Polled cattle made a fine show, the grand Angus bull Cash winning the championship and gold medal, and the Galloways were superb. Mr. Villier's grand four-year-old bull Vale Royal of Closeburn winning first in his class and the championship, while Maggie of Tarbeach, in her five-year-old form, a most perfect model of a Galloway, was placed first in her class, and was also awarded the championship for best female, and the Queen's gold medal for best Galloway in the yard. The young bulls and heifers were all good, and the judges might well have commended the whole class.

The Ayrshires were evidently not at home here, but we judge were at home in Scotland, for they made a very weak show. It would have been very weak in Canada, and what struck us as strange was the award of the first prize to a pure white cow, the only white Ayrshire we ever saw, but we were never in Ayrshire and it may not be a rare case.

Guernseys made an excellent show and a favorable impression. Many of the leading dairymen regard them as the coming cow. They have more size and constitution, and greater capacity than the Jerseys, and give a large quantity of rich milk. They certainly have the appearance of being good workers in butter making. But the Jerseys! what shall we say of the Jerseys at the Royal? Well, it was the finest show and the

largest we ever saw. Think of it, 424 entries at one show, nearly twice as many as of any other breed, and not a mean one among them. It was a magnificent display; such beautiful bulls, and such useful cows. The judges evidently knew their business, and judged them not by the Shorthorn rule, but by the test of merit, by their capacity for real work in the dairy, and, judged by this rule it was no wonder that the first prize cow was not the best looking, but a thin little animal, whose ribs could be counted through her skin, and whose hip bones you could hang your hat on, and she was the only cow in the show that had any white mark, but such an udder, and such milk veins, and such a conformation for hard work as would delight the practical dairymen. This modest little matron was awarded the championship and the Queen's gold medal as the best of her breed.

SHEEP.

England is acknowledged to be the fountain head for the supply of breeding sheep for the world in all the improved breeds except Merinos, and it is safe to say that the display of sheep seen at the Royal Show cannot be equalled anywhere in the world. Here are twenty-three distinct breeds, nearly all of which are considered profitable, and are adapted to the section of the country in which they are raised. The different classes of Downs cover the larger portion of the country, and it is not strange that they appear in the greatest force at the National Show. The Southdowns have been bred to a high degree of perfection, and show very fine quality of both wool and mutton. The best specimens shown are exceedingly fine.

The bulk of the best prizes go to breeds of high rank, such as Mr. Dolman, M. P., the Duke of Richmond, H. R. H., the Prince of Wales, and others. Shropshires have been vastly improved in the last few years, they are fast approaching the Southdown type, and are not so large as they formerly were, but have better feeding qualities and finer fleeces. There is a much larger entry in this than in any other class, and consequently a much larger proportion of blanks to prizes, for the same number and amount of prizes is given to each, no matter whether the competition be great or small. Hampshire Downs are a popular breed over large sections of the country, and the rams are sold at high prices for crossing purposes. These are very large sheep, with very plain heads, but they make a strong show, especially in early lambs. The Oxford Downs make a very strong show at the Royal, and have their friends in considerable numbers in some sections. They are a very large class of sheep, and the competition is keen. Cotswolds, in proportion to their number in the country, and the extent of territory they occupy, make a larger entry than any other class. There being sixty entries, and all of a high order of merit. The breeders of these sheep are being encouraged by an increasing demand for their rams, which are sought after by the average farmer to cross upon the Down ewes to produce early maturing lambs. The Jubilee Royal has brought a number of competitors out, and high prices have been asked and obtained for good ones, a number of which have been bought for Canada. The old fashioned Leicester, a short, fat sheep, is still shown in limited numbers, and the Border Leicesters are here in considerable numbers, but do not strike us as being equal to what we are used to seeing at our Canadian shows, while the Lincolns, in small numbers, but of great size and good quality, are shown, and are bringing very high prices for exportation to Australia and New Zealand. Three rams, it is reported, were sold at Windsor for £450.

HOGS.

The show of pigs, except in the Berkshire class, does not meet our expectations. These form the leading feature in this section of the show, as will be seen by the statement of entries, and this applies in the case of all the shows we have attended. At the Wiltshire county show, where all classes of pigs are allowed to compete together, not a single specimen of any other breed but Berkshires were shown, and they occupied the whole range of pens. Berkshires at Windsor were a very strong class, a number of very superior animals being shown by a large number of

breeders, including a good many men of high rank, and prices for choice animals ruled very high, in some cases as high as 50 guineas. A number of the prize animals and other selections we learn have been purchased to go to Canada and the United States. There are some enormously large, white hogs, and a capital show of the small, black breeds, generally called Essex, were taken to Canada. The small whites, called Suffolk in Canada, are also represented by many fine specimens.

The Dairy.

Do Cows Need Exercise?

The Hon. Hiram Smith, Dairy Commissioner for Wisconsin, recently made the statement that cows do not need exercise. It has long been conceded that ruminants require but little exercise, and Mr. Smith claims that in the case of cows sufficient is furnished in the elaboration of milk. The best stockmen in Ontario claim that cattle may be tied up in the fall and not turned out until spring, and the very best results obtained, and we have yet to hear of evil results from such a course. The writer has for some years past pursued this course with one or two cows with very satisfactory results, and would not hesitate to repeat the experiment on fifty, if necessary. This removes the most serious objection to the soiling system, and there is little doubt that, before another decade, soiling will be adopted by many who now sneer at the idea of taking feed to the cattle instead of taking the cattle to the feed.

Another Ingenious Device.

Some gentlemen from Stockholm have recently come over to New York, bringing with them a butter machine which is certainly a marvel. The editor of the American Dairyman, who was present at the trial, speaks of it as follows:—

"We must admit to much skepticism on the claims that have been advanced for this machine, and preferred to be cautious in our remarks about it until we saw it work. We have now seen the milk put in, and drank some of it, to see that it was of ordinary quality, and not loaded with cream. Tested it with a thermometer to determine its temperature, saw the machine put in motion, and, while we could not count the revolutions, we were sufficiently familiar with the buzz and hum of the separator to know that it ran at about the same speed as that machine. We saw the skim milk appear and drank some of it, and it tasted just as skim milk does from the separator. Out of another tube came, in just four minutes—the time necessary to get the machine to full speed—from the time the machine started, the first appearance of butter, which was instantaneous with the turning on of the milk in the extractor, such as is familiar to the man who looks for such a result after grinding at the churn for thirty or forty minutes. Then the substance thickened, and in a minute or less time after this the granular butter began to appear. The operator touched a lever, and the butter came slower but thicker, and as he moved this lever around a continuous stream of butter in granular form came slowly out of the tube. In about ten minutes the twenty-one gallons of milk was all run through, and over seven pounds of as fine butter as we ever saw was ready for the work table. As an old expert, in judging the best specimens of butter made in this country, the writer pronounces it as fine as anything he was ever called upon to pass judgment on.

"The marvellous feature of this machine is that it carries the centrifugal principle so much further than the old machine that it actually eliminates everything from the butter globules, they being the lightest portion of the milk, and collect in the centre, and all this is done at the same speed necessary for running the ordinary separator, and with milk at a temperature that other machines cannot handle. The butter has but one and one-half per cent. of caseine in it, so that it keeps better than that made by any other process. The butter, as it comes from the machine, is of course perfectly sweet, but if it is desired to have sour butter, then a slight washing of the granulated butter in sour milk accomplishes this end. At an estimate made at the above trial, it required about twenty-two pounds of ordinary milk to make a pound of butter, which is excellent work. This machine has the same excellent method of removing all the fibrin and filth from the milk that is common to all centrifugal machines."

The Dairyman says in conclusion:—"We have told frankly and honestly what we have seen, and it needs no prophet to anticipate the future, when all other processes must be superseded by a machine that gets as much and as good butter as any other, and at the same time does it in a few minutes from the time the milk is taken from the cow, and saves all the trouble, labor, danger and expense of ripening and churning the cream."

Dairy Farming.

BY PROF. JAS. W. ROBERTSON, GUELPH, ONT.

The farmer's sphere of occupation is to provide food and the raw material for clothing for the rest of mankind. Himself and his family have a right to a first toll upon all the fruits of their labor. In filling their place and doing their work, they must call to their aid, and make subservient to their ends, suitable domestic animals. In degree, as farmers have provided a better class of food, advancement has been made in all the attainments of civilization. Progress in agriculture has been leading men to better lives through all the ages. While people live solely upon roots and fruits, they are on the confines of barbarism. Civilized people subsist upon a more varied and substantial diet. Bread without butter does not satisfy. Meat of some sort must accompany potatoes; and so on, through the whole bill of fare, vegetable foods are supplemented by animal products. To provide these latter of the most acceptable and nutritious kinds, in the most economic way, is the purpose and place of dairy farming. As farmers produce an increased quantity of superior food per acre, they make it possible to support a larger population. Population is the only element which gives value to property. Hence, successful dairy farming means an increase of value in all property in a country or section where it is followed.

Many parts of plants cultivated by farmers in a rotation of crops are entirely unsuitable for direct consumption by man. By making animals consume such plants or parts of them as are digestible by the human species, there may be obtained from the animals appetizing and nourishing products quite suitable for his table. That is the true place of dairy animals in farm economy. In order that animals may be kept with advantage and consequent profit, the farmer's skill and judgment should provide plants suitable for their maintenance.

The sun is the working power that elaborates

soil food—commonly spoken of as manure—into plants serviceable to man. The sun is the source of all the energy that does all the work in the world. It is the veritable working power on all the farms, though too often its value and usefulness are unknown and neglected. Plants are contrivances of nature, whereby and wherein the sun stores up his strength and warmth for man's service and comfort. He should be kept at work all day long. When enough suitable materials for the sustenance and increase of plants by their growth is present in the soil, the sun never fails to exert his energy for the elaboration of these through plant life into other forms. When the soil is devoid of or deficient in the supply of the substances, simply from the want of the raw material upon which alone he can work, the sun is kept "loafing" over the fields day after day. No farmer can afford to have the hired man "loaf" around the kitchen stove while he himself toils outside. Much less can he afford to keep the sun idle upon his fields. The farmer's first duty is to see that the soil contains all that is needed for the up-building of plants, and then, by proper management of the soil and selection of the seed, he may indeed harness the sun every morning and make it do his will. His occupation demands a brain, a judgment, a will to rule, in order that he may justify his birthright in being given dominion over the earth and its plant and animal life. The air is the source of a large per cent. of the substances that go to form the structure of plants. From it the sun is able to appropriate to the plant the very elements wherein he can best accumulate and store his strength for man's use. The corn plant is one of the best aids and means whereby this can be done. That it may be done most efficiently, corn should be planted thin, where sunlight can shine and air circulate freely.

Water is nature's universal vehicle for the carrying of the particles that compose plant food and animal food to the proper places in their bodies, for the sustenance of life and the increase of weight and size by the vital process of growth. The presence of too much water will hinder it from performing its peculiarly necessary tasks. Neglect of drainage will frequently leave such an excess of water around the plant roots that they are literally drowned. The absence of sufficient water in the soil may cause the plant to starve in the midst of plenty. The soil, besides its function for the retention of food for plants, is also the mechanical means for the holding of plants in position during their growth. Drainage and cultivation are treatments of it for the rendering of that food more easily available by the plants. In carrying on his work, and in the disposal of his products, three elements of cost to himself should be reckoned by every farmer. In the sale of every article of farm produce, he disposes of a part of the substances of fertility of his soil. To that he gives an increased value by the application of his labor and skill. In fact, in every article he parts with he sells a three-fold commodity, namely, substances from his farm, labor and skill. Dairy farming will enable him to market much skill, without the need for impoverishing his farm by selling its enriching substances—the elements of fertility. It also offers opportunity for selling skilled labor, which brings a larger return to the salesman, with less permanent exhaustion of his powers. The following table will represent the gist of this idea:—

\$300 Worth of	Elements of Fertilizer.	Labor and Skill.
Wheat, at \$1 per bus., represents.	\$48 00	\$152 00
Milk, at 85c. per 100 lbs., ..	23 60	178 00
Cheese, at 10c. per lb., ..	18 00	182 00
Beef, at 5½c. per lb., ..	17 00	183 00
Pork, at 5½c. per lb., ..	13 00	187 00
Horse, ..	7 00	193 00
Butter, at 25c. per lb., ..	25	199 75

When only ten bushels of wheat per acre are grown, the farmer receives but \$152 for all the labor and expense involved in the cultivation of twenty acres of land, and the harvesting and marketing of its crop. Such labor does not bring him quite thirty cents per day. If, by the application of skill to his work, he so enriches his soil, so drains and cultivates his lands, and selects the kind of seed best adapted to his circumstances of locality and climate, he may

obtain thirty bushels of wheat per acre. In that case he will receive an equal amount, namely \$152, for the labor and skill involved in the cropping of but seven acres of land. When a farmer keeps cows that bring him back \$15 worth of product a year, when he sells lean steers at \$30 per head, when he markets hogs that weigh 200 pounds at one year old, when he sells a horse for \$75, and when he takes strong butter to market that is dear at fifteen cents per pound, he gets hardly thirty cents a day as remuneration for his labor. If he will put skill into the selection, breeding and feeding of his cows, steers, hogs and horses, and into the handling of their product, he may make one-fourth of the labor bring him much higher money returned. So on through the list, skill alone is the element that gives labor a value greater than thirty cents per day. The more skill that is exercised, the higher and more certain will be the satisfactory remuneration. For example, there will be left for labor and skill in the feeding of three cows \$178, as compared with an equal sum representing the labor for the keeping of thirteen cows.

In order that the plants grown may yield the best return of which they are capable to the husbandman, his skill should be exercised to provide animals which can return to him the most in products or service for the food which they consume. It is possible to keep animals which yield so much less in product than they eat, that they are veritable burdens upon the man whose they are. Instead of being his servants, living and laboring for him, he sometimes becomes theirs, and apparently lives to keep and feed cows, hogs and horses. The cow in all civilized countries is always a boarder upon some person. She should be made pay for her board at such remunerative rates as will leave a profit for the boarding-house keeper. If she fails in that, she should be made to render a service which she will not willingly contribute. Her carcass should be made into beef, and her hide into leather. She should not be slyly sent to board upon some other unfortunate man. A cow with the business habit of keeping all her accounts with the world paid up through the man who owns and feeds her, is a good business cow. That is the kind of cow I recommend. Her powers of service will be indicated by certain external points. She should have a long, large udder of the elastic fine quality, a mellow, movable skin covered with soft silky hair, a long, large barrel, hooped with flat ribs, broad and wide apart, an extensive loin spreading out into broad, long hind quarters, an open twist with rather thin hips, and a lean neck of symmetrical length, carrying a clean cut, fine face, with large prominent eyes. A cow with these points has ability to serve a man well, if she gets a fair chance. That her calves may have powers equal to or better than her own, care should be exercised in their breeding. The best blood of the breed best adapted to the farmer's purpose, should be used to enlarge and not to deteriorate the working capacity to be transmitted to her offspring.

At the late Toronto Exposition the milk of the test cows on exhibition was submitted to analysis to determine the quality of the milk as well as its quantity. These cows were not grass fed, dog chased dairy cows, but cows especially fitted for the show. Cow No. 1 gave milk that contained 17.67 per cent. of solids, of which 8.99 per cent. was pure butter fat. Twenty-five pounds of her milk made at the trial 2.22 pounds of butter.

A wise old dairyman writes an eastern paper the following: "I think I would annihilate, if I could, every dog in the land for the cows' sake. A kind and conscientious farmer said he always sent the laziest man he had after the cows and when he had none lazy enough to suit he went himself. The farmer who will allow thoughtless boys to stone, and dogs to bite and hurry his cows with full and heavy udders, ought to learn to better subserve his own interest by being prosecuted for cruelty to animals." There is one thing certain, and that is, that whether he knows it or not such a man is being punished every day by a loss of yield in milk and butter, and especially the latter. Providence generally takes care that such men do not get very rich out of acts of thoughtlessness and cruelty to the gentle cow.

The Dominion Milk Act, 1889.

BY PROF. JAMES W. ROBERTSON, GUELPH, ONT.

When the milk yielded by the cows begins to shrink in quantity, the temptation to make up for that some other way is increased. The Act passed by the Dominion Parliament during last session, to provide against frauds in the supplying of milk to cheese, butter and condensed milk manufactories, is a piece of wholesome legislation.

It forbids the sending or supplying to any factory:—

- (1) Milk diluted with water.
- (2) Milk in any way adulterated.
- (3) Milk from which any cream has been taken.
- (4) Milk commonly known as skimmed milk.
- (5) Milk from which any portion of that part of the milk, known as strippings, has been kept back.
- (6) Milk that is tainted or partly sour.
- (7) Milk taken or drawn from a cow that the patron knows to be diseased at the time the milk is so taken or drawn from her.

The penalty for each offence against the provisions of the Act, upon conviction thereof before any Justice or Justices of the Peace, is a fine not exceeding fifty dollars, and not less than five dollars, together with the costs of prosecution. In default of payment of such penalty and costs, the offender shall be liable to imprisonment, with or without hard labor, for a term not exceeding six months.

The person, on whose behalf any milk is supplied to a factory, shall be *prima facie* liable for the violation of any of the provisions of the Act.

For the purpose of establishing the guilt of any person charged with the violation of any of the provisions of the Act, which forbid the supplying of milk, as mentioned in clauses marked 1, 2, 3, 4 and 5 of this article, it shall be sufficient *prima facie* evidence to show that such milk is substantially inferior in quality to pure milk. The tests are to be made by means of a lactometer, or cream gauge, or some other proper and adequate test, and by a competent person; provided always that a conviction may be made, or had, on any other sufficient legal evidence. Any person accused of an offence under this Act, and the husband or wife of such person, shall be competent and compellable to testify. The fine, when recovered, shall be payable—one-half to the informant or complainant, and the other half to the representative of the factory to which the milk was sent—to be distributed among the patrons in proportion to their respective interests in the product thereof.

Professor Roberts, of Cornell University, tells of a successful dairyman of his acquaintance whose cows average \$80 per year. The average of a bull from an \$50 herd bred to cows that pay only \$25 per year would be \$52 a cow. This would still further reduce the immense tax for wintering dry milk cows. He recommends warm, comfortable stables and appetizing food, which latter he said, in a majority of cases, means digestible food. He also condemned obliging cows to drink ice cold water from a brook.

The late Professor L. B. Arnold, one of the best American authorities on matters pertaining to dairy husbandry, declared that, after studying the effects of the customary treatment of dairy stock for over thirty years, he is confident that "scanty feed in summer drouths, and pinching with needless exposure to cold in winter, keep the annual product of the cows of the country forty per cent. below what it would be with fair and constant rations the year round, and comfortable housing.

Cleanliness is one of the essential features of the dairy room and of the handling of milk in general. If you are careless in this matter, no matter how careful you are in other details, you will not have a prime article. A half a minute spent in brushing off the cow's udder before milking will often save calling the butter merchant hard names after the return for the butter has come. There is a certain aroma that customers are willing to pay for—but it doesn't come from the cow stable.

Veterinary.

Ontario Veterinary College.

This institution, while possessing a comparatively short history, has a remarkably successful one. About the year 1860 some of the members of the then Upper Canada Board of Agriculture, saw that it would be necessary to found an institution where the proper care and treatment of live stock should be taught. The gentlemen who more especially interested themselves in this matter, were the late Hon. Adam Ferguson and the late Professor George Buckland, of the University of Toronto. Professor Buckland crossed the ocean in furtherance of the idea, and sought the advice of Professor Dick, then the Principal of the Edinburgh College, as to a suitable person to give veterinary instruction in Canada. Professor Dick highly recommended Mr. Andrew Smith, a recent graduate of the Edinburgh College, who, after receiving and considering the proposals made to him, consented to take up the work, and cross to Canada.

A school was organized, and lectures given on the various subjects necessary for a veterinary education. This course was attended by three regular students, and a number of agricultural students who did not propose to become veterinary surgeons. The progress of the school was steady and sure, but, for a time, slow. Gradually the attendance of students increased, and before many years the necessity for increased accommodation became urgent. This necessity was met by the erection of a building on the present site. This building served very well the purposes of the forty students who were then attending. By 1874 and 1875 it became evident that the school had again outgrown its premises. In 1876 the present enlarged building was erected; room was thus provided for more than 200 students. The institution now appropriately took the name of College, the staff consisting of the following gentlemen:—Professor A. Smith, Principal of the College, and professor of diseases of domestic animals and anatomy; Dr. Thorburn, materia medica; Dr. Barrett, physiology; Professor Buckland, the breeding and management of farm animals, while instruction in chemistry and other subjects was received in our University College.

Ample as were the facilities thus provided, the growth of the College was so rapid that in a few years 300 students were in attendance, and it became necessary to rent a hall in the neighborhood, seating 400 persons comfortably. And for the last year or two this hall has been so uncomfortably crowded by the attending students that Professor Smith finds himself compelled to enlarge the College very greatly. Adjoining the present commodious building there is in course of erection an addition measuring 56x90 feet, four stories high, with basement, the various flats being so connected with the present building as to more than double the accommodation.

Thus enlarged and improved, this will be the finest College building in America for the purposes of veterinary instruction, and good authorities state that there are very few finer in Europe. The large practice of the College is open to the students for their benefit, and they are carefully instructed therein by Professor Smith and his clinical assistants, J. Stewart, V. S., and S. H. King, V. S., the latter of whom also is Demonstrator of Anatomy.

The success of graduates, speaking generally, has been remarkable, and bears strong and practical testimony to the thorough training given by the Ontario Veterinary College. This institution owes its vitality and a large measure of its success to its Principal, Professor Smith. And great as has been its prosperity in the past, every Canadian will wish for it—the pioneer and leading Veterinary College of the continent—still greater success in the future.

The Farm.**A Philanthropist.**

Sir J. B. Lawes has just completed the arrangements for bequeathing to rural science the sum of \$500,000, together with fifty acres of land and the laboratory at Rothamstead. This was spoken of some years since, but owing to the death (Sir John told me at the time) of one of his most intimate friends, who would have been a trustee for its administration, the project was not completed. The income of the fund is to be handed over to a committee of nine persons, including the owner of the estate for the time being.

As most of our readers are aware Sir J. B. Lawes is the largest private experimenter on agricultural matters in the world, and it is very doubtful if all the experiments ever conducted on the American continent have benefitted agricultural science as much as his have done, and for the man who has devoted most of his life and a large amount of money to this object, to bequeath as a final tribute so princely a legacy is philanthropic indeed, and deserves the gratitude of every intelligent agriculturist.

Weeds.

In any given locality, new weeds, like new insect pests, are from time to time making their appearance. Were the farmers to recognize these vegetable foes, and to realize their possible troublesomeness, they would spare no pains to check their progress at the start. In most cases noxious weeds can be easily kept out if the effort is made before they get well established.

The methods of introduction are various. The thistle, milk-weed, fleabane and dandelion are wind-distributed. In seed oats it is hard to detect the grains of their wild congeners that may be present. Bugloss, ragweed and sorrel occupy waysides and waste corners, and therefrom make excursions into the grain fields and meadows. Some weeds, like the clot-bur, follow the courses of streams or ditches, and that, as well as the burdock, stickseed and common bur, gets a ride to many a station on a sheep's back. But the most common method of introduction is sowing along with grass seed and clover. In this manner many a field has been stocked with false flax, wild mustard, wheat-thief or ox-eye daisy.

As a rule these weeds are exhaustive of the fertility of the soil. Some of them, when thick, impoverishing it as much as a crop of grain. In this respect the thistle, troublesome as it is, is far from being the worst offender.

It would be useful and interesting to know the areas occupied by these and other weeds, particularly by such as are more local than those mentioned above. If among our readers, and they include persons interested in the subject in every county and corner of the Dominion, a number would take the trouble to send us a list of the weeds—any number from one to twenty—in their neighborhood, arranged in the order of the noxiousness, putting the one they think worst first on the list, we would tabulate the lists and comments, and base a useful report upon them. Specimens in flower or seed of plants, of which correspondents do not know the name, may be sent to us with their number in the list attached. Postage on plants in packages, open at the end, is only one cent for four ounces.

Let us hear from you. Help us to disseminate knowledge on this subject. To be forewarned is to be forearmed.

Some Things which Hinder Greater Success in Canadian Husbandry.

Could we, at the present time, take a bird's-eye-view of our country, and see its broad fields, its many beautiful homes and comfortable farmsteadings; its thriving cities and busy towns; its intelligent, prosperous-looking inhabitants, the thought would come: Here prosperity reigns, and hindrances are unknown. Or if we compare our land with any country of a like age, the conclusion will be most favorable to us. Where is the young country that has produced such excellent breeding stock; such grand specimens of fat cattle and sheep; such abundant yields of grain of superior quality, and such cheese of far-reaching fame? Have not Canadians on many occasions competed most successfully with our enterprising and numerous neighbors to the south, and wrung from them the admission that our stock of various kinds is superior to theirs? But there are hindrances, and to them we now refer. They are of two kinds: those directly under the control of the agriculturist, which can be removed by individual and general effort; and those placed by our legislators—both local and federal—as barriers in the way, which the Canadian farmers could, with united action, hurl aside, and thereby open the way for that high tide of prosperity to which we are justly entitled. Not only would agriculture progress, but also every industry to which our country is by nature adapted; as the foundation on which they would then rest would provide safe and solid support. As well might we expect a castle whose foundation was laid on a surface of sand, to remain in a good state of preservation, as to look for an agricultural country, as Canada, to fully prosper, with its wealth-producing classes—of which the husbandmen constitute a large majority—not given equal advantages with other classes in our community.

First, I will endeavor to point out the hindrances more immediately under the control of the individual farmer. One of the most noticeable is the want of proper training for the business. Some sections have progressed much more rapidly than others having equal natural advantages, though the latter may have been settled some years earlier. This seems strange at first, but enquiry reveals the fact of the backward sections having been peopled by emigrants from the older countries who were brought up as fishermen, laborers, or crofters, whose knowledge of farming was very limited. They had the pluck, endurance and perseverance to face the hardships and overcome the difficulties attending the making of homes in Canada. Their intentions generally at the outset were to clear up some few acres, as their ideas were naturally restricted; and they had not in the least imagined what this Canada was destined to be. As years rolled on, clearings increased in size, but not the capacity of management. When numbers of them settled together the force of beneficial example was not brought to bear on them, or their descendants; so that this hindrance is still blocking the path in many parts. No doubt well-to-do, or what may be termed, comparatively speaking, wealthy individuals, are to be met among them; but it is usually at the expense of their farms, and by practising the strictest economy.

This obstacle may be partially removed by making our common public schools more efficient for training the majority for their life work. The elements of agriculture should be taught thoroughly; and as but few of those who farm get the benefit of any higher education than that afforded in them, pupils should be far more advanced ere they could be compelled to pass into the high schools. In this advanced age, who can conscientiously maintain that the pupil passing the entrance examination to a high school is so taught as to fit him for battling successfully with the difficulties of life, and make his business a progressive one? We must not forget that well-trained brains are yearly becoming of more importance on Canadian farms than muscle, as labor saving machinery is doing away

with much of the hard manual work of the farm. As the use of machinery increases, so are clear, thoughtful, intelligent, practical minds more necessary to make the more expensive system of tillage yield remunerative returns. In saying the more expensive system, I do not mean that the work is necessarily done at a greater cost, but that the purchase of machinery causes a greater outlay. We have the Agricultural College at Guelph, where the to-be farmers are trained. With the efforts that are being made to cause the training in that institution to be as beneficial as possible, it will undoubtedly be a great advantage to the students who take a course there.

But, while much can be done to benefit the young, cannot the present farm occupants—men who are beyond the time of school and college life—be reached? Or must those still young, but, who, owing to circumstances, are obliged to give up everything in the way of direct education, just remain as they are for life? "Where there's a will there's a way;" so where the desire exists, means are abundant by which much may be learned.

Standard works on agriculture are within the reach of all; very instructive agricultural journals—as the FARMER'S ADVOCATE, for instance—are so cheap; and farmers' institutes are held, where interesting subjects are dealt with in such an intelligent manner, that none need remain ignorant of how to advance in the business of farming. Most useful knowledge can be gained by attending exhibitions—exhibiting, if possible—as, by comparison, valuable lessons may be learned. Visiting well-managed farms and successful stockmen afford to the observer and thinker useful information.

Waste.

This demon of waste is the fiend that is eating out the profits of our farmers. Keeping unprofitable cows, feeding weather-beaten fodder, and doing everything in the most expensive manner, and then wasting their breath calling themselves *practical*. The yearly waste of labor, land, and fodder that is going on among the farmers of Wisconsin alone, could, if corrected, pay all their taxes four times over.

The reason why this is done is because the farmer right down in his heart of hearts does not believe that farming is a work of brains. He still thinks it is nothing after all but hard-handed toil. It takes toil, and hard toil, to be sure, but is it a sign of smartness when a farmer has raised a fine field of fodder corn to let two-thirds of its feeding value go to waste? Is it good farming, or practical farming, to lose half of the results of your toil? Most men call it foolishness, and most men are right, when they so call it.—[Hoard's Dairyman.]

The above paragraph, from our able contemporary, is equally applicable to Canada.

At a recent Farmers' Institute meeting the writer made the statement (which passed unchallenged) that the loss to the farmer from the manure heap affected him for evil more than all the grievance of painful legislation. And yet, to the majority of farmers, any reference to proper methods of saving and handling manure is "scientific farming," and not practical. This statement is usually made without consideration of the fact that science is knowledge classified. Competition is becoming very keen between nations and even districts, and the soil is losing its fertility under the present system of farming. It, therefore, becomes us to read more, think more, and act accordingly. The most successful man is not always the one that toils from "early dawn till dewy eve." On the contrary, the man who makes a study of his work and is constantly alive to new and improved methods, and is not bound to the ruts of orthodoxy, is invariably successful.

How to Build a Silo.(Continued from page 218.)
BUILDING A SILO.

Two important points must be kept in view when building a silo—it must be *air-tight* and *frost-proof*. Now, to make an air-tight and frost-proof room, it must be double walled, with a dead air space. Another important feature which must not be lost sight of is:—Be sure and get it strong enough. Many have failed from this cause. A silo should be made as strong and solid as though you were going to fill it with wheat up to the very top.

The next point is the location. When space and convenience permit, there is no better place for it than in the barn. This makes it convenient to feed, and saves expense, as no roof is required. It should be remembered that the silo will surely increase the stock of the farm, and this should be taken into consideration in locating it. If the barn has a basement, so much the better; it may extend from the floor of the basement to the plates. If it is built outside, it should be located with reference to ease and convenience of feeding all the stock: horses, cattle and sheep, as well as hogs. It should be remembered that feeding is daily work, and no pains should be spared in planning to bring the door or doors of the silo as near as possible to the mangers that are to be filled with this silage two or three times per day. This matter should have careful, thoughtful consideration. If a few hours thought, study, and planning will save months and years of regret, it will be well employed.

The size of the silo will depend very much on the size of farm and position; but don't make it too small, so that, with the succeeding year, you will have to build a second one. This adds much to the expense.

As a guide in determining the size, let me say, that in estimating forty pounds to the cubic foot, a silo, ten feet square and twenty feet high, will hold forty tons of silage; and one fifteen feet square and twenty feet high, will hold ninety tons. Now, at fifteen tons to the acre (which is a low estimate) it will take not quite three acres to fill the first, and about six to fill the second. Figure 1 shows a good way to make a secure foundation. The soil is all excavated from the floor to a depth of about one foot over an area covering the outside measurement of the walls. A trench is then sunk, just inside this excavation, and built up a little above the outside surface of the soil, as seen at A. A sill, 8 x 8, is bedded into the inside foot of the wall at B. The studding C for the frames, is cut with a shoulder, and set on the sill, the spur going down inside to the earth floor, D. The studding for the building should be 2 x 10 inches, and set 16 or 18 inches apart on the sill. The inside lining of the silo comes down close to the natural soil of the floor, F. By this plan, the trench affords needed drainage, and the slight excavation gives the *back support* of the natural earth G, and is not only thus made secure, but gives "dry footing" to a building that of necessity must be built with sills close to the ground.

In digging the trenches, throw enough earth inside to raise the silo floor up to the top of the stone wall. Upon this stone foundation a sill made of four 2 x 10 planks should be bedded in mortar (see fig. 2). In laying the sill, the top plank should not be fastened to the others but left loose, for reasons soon to appear. The studding should be 2 x 10 plank, preferably 18 feet long. After carefully sawing the studs to uniform length, and squaring both ends, arrange them in a horizontal position, resting on the

edges, and placed 16 inches apart; they should be supported on a level with and at right angles to the sill upon which the bent is to be raised; then spike the loose plank of the sill to the foot of the stud, and when all have been firmly

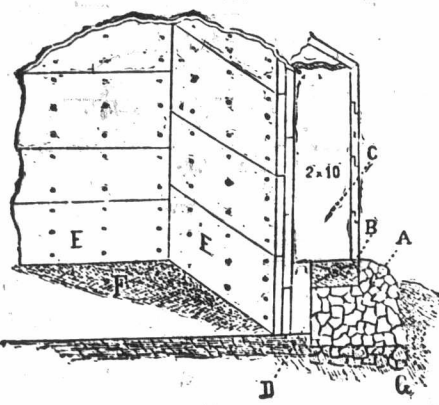


FIG. 1.

fastened as directed they should be secured at the top in the same manner. After fastening the studding to sill and plate-planks, the side or end, as the case may be, is ready for raising.

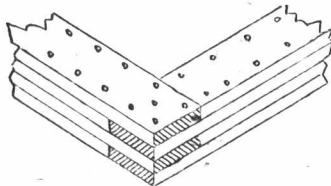


FIG. 2.

After the bent has been raised in a vertical position to its place on top of the other three planks of the sill, the third one that was nailed to the foot of the studding before the bent was raised

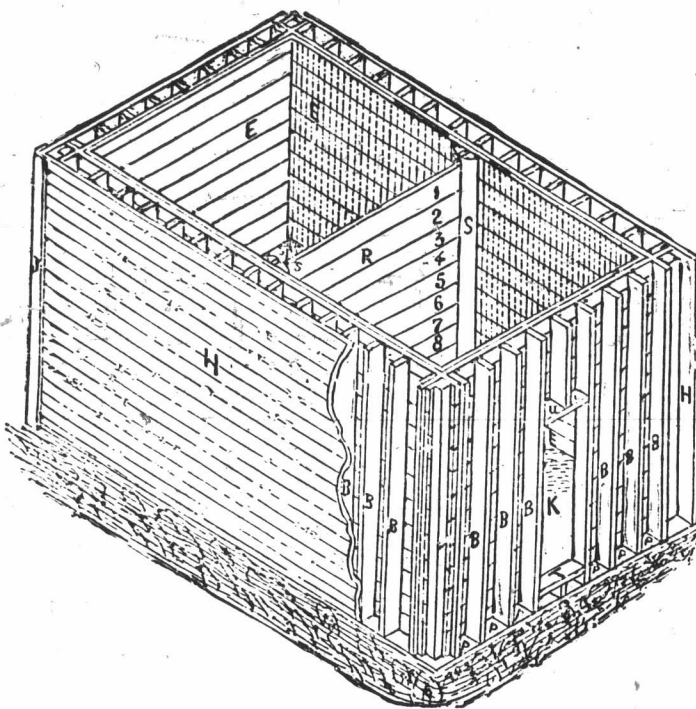


FIG. 3.

can be firmly spiked to the lower ones. This first bent can be held in place by temporary stays until the remaining sills are raised; the plates can then be nailed at the corners and the skeleton frame is complete; two 2 x 10 planks will give all the strength necessary for the plate. It will be observed that by following this plan the studs are securely fastened, top and bottom, and the full strength of sill and studding is saved, there being no mortises cut in the sill and no tenons on the studding. After the frame is up the next thing to be done is to bridge the studding. This is a very simple thing to do, but of so much value in strengthening the walls that it ought never to be omitted in a silo.

[TO BE CONTINUED.]

Garden and Orchard.**The Northfield Beauty Apple.**

This apple, like the Wealthy, is claimed to have been grown from a seed of the Yellow Siberian crab. The tree has very little about it to indicate relationship to the Siberian, yet the fruit has the pure and delicate tints, pale yellow and rose color, which we see in the pure crab, and in many of their hybrids. But the Northfield Beauty is an apple in size, averaging three inches in diameter, when fairly well grown. In quality it is among the best desert apples of its season, which is early winter in lat. 45 deg. N. The tree is a very good grower, with small, light-green foliage, which is whitish downy beneath, and somewhat crumpled. It bears young and abundantly, yet without the tendency of the Wealthy to destroy itself by overbearing, and is about as hardy as the Wealthy. The fruit, besides its beautiful coloring, is always smooth and fair, being free from fungous spotting, or other disease, and but little affected by the codlin worm. It is conical, with a rather long stem, and hangs well to the tree; but it requires careful handling to get it to market without injury. Its limit of season is about the holidays, and undoubtedly it is a valuable apple for that time, on account of its delicate beauty, which is well justified in its fine quality for dessert. Its place of origin is Northfield, Vt., where it was originally known as "Cady's Crab."

The "Ostheim" Family of Cherries.

The first success in growing cherries for market in the cold north was from seedling trees grown by German immigrants to Minnesota. These growers called them "Ostheim" (East Home)

cherries, but admitted that they were seedlings, which differed considerably in season, size, color and quality, yet with a strong family likeness in tree and fruit. The name "Ostheim" was not altogether unknown in America, for Downing describes a cherry of the Morello family under that name, with the synonym "Ostheimer Weichsel," and "Frankische Wucher Kirsche." But though Downing tells his readers that it is "tender, juicy, rich, almost sweet, subacid, very good," it never seems to have become known to American growers; and no nurseryman, and so far as can be learned no amateur, seems to have preserved it, if in fact it ever was imported. However this may be, the success of Germans with it in Minnesota created a lively demand for it, which has been filled chiefly with suckers from the seedling originals, a number of which, no two quite the same, I have from time to time received. Prof. Budd, of Iowa, has imported and supplied me with

trees of "Cerise d'Ostheim," which he says is "hardier than the Minnesota Ostheim and bears better, larger, and earlier fruit.—[Orchard and Garden.

Professor Robertson, of the Ontario School of Agriculture, made us one of his short calls a few days ago. He had recently been at the Dominion Central Experimental Farm, Ottawa, giving instructions concerning the construction of a silo for that institution. The Professor is very enthusiastic on the benefits Canada will derive from winter dairying, and winter raising calves in the near future. He reports a greatly increased interest in ensilage; very many silos are being built this season.

Defeating the Squash Borer.

The squash borer is usually called the worst and most difficult to handle of any of the garden pests, but we do not find it so. Since adopting the method of layering, some years ago, we have had no more trouble. The insects were given full sway, and tunneling through the main stalk near the surface of the ground, they often completely severed all connection between the vine and its original roots, yet the roots emitted in great abundance from the soil-covered joints maintained the plants in full vigor and health. Prompt action will generally insure success. Pile on fresh soil over the first one or two joints just as soon as the vines begin to run. This probably can not be done with summer squashes, but owing to their quick growth and early bearing, the home gardener usually has what fruit he may desire of them by the time that the vines give out in consequence of borer work. It is merely a matter of conjecture, but we believe that the moths might often be kept off, or the eggs and larvae destroyed before much damage is done, by daubing the stalks near the ground with some resinous, sticky substance, or coating them with molasses.

The layering method has one drawback. It gives us an easy means of protecting the crop, and a sense of security which would naturally induce us to neglect the destruction of the enemy. This should not be. It is every grower's duty to carefully hunt up every one of the rascals before they leave the vine, and kill it, and in this way to reduce as far as possible the number of borers that will come to trouble us another year. We do not remember that we ever had melon or cucumber vines attacked by the squash borer, while our squash vines were rarely free. On the other hand, the latter was never injured by the melon fungus, so far as our observation goes, while the fatal disease often ruined our cucumber patches and did serious damage to the melon vines.—[Popular Gardening.

Potash for Asparagus.

BY W. A. HALE.

Under the above heading, I noticed an article in the June number of the *Advocate*, by B. F. Johnson, written, I infer, more particularly for the benefit of those who grow it on a very limited scale. However, being somewhat interested in the subject, I at once made enquiries as to where the silicate of potash could best be procured, and what the probable cost would be, but as I found that it would require over 2,700 lbs. of potash to apply the quantity mentioned in the article, supposing the applications were made four times during the growing season, and as the best quotation I could get of the price was 25 cents a pound wholesale, in New York, I was not prepared to try the experiment at the outlay of over \$680 an acre, while the additional cost of carrying fifty-four tons of water, would certainly make it more laborious than profitable, and, although I am not prepared to endorse the statement that asparagus acquires the flavor of some of the rank manures applied to it, yet so convinced am I of the importance, I might almost say the necessity, for a rotation or change of fertilizers where the largest crops are annually looked for, that I should be thankful to hear of any practical change from the ordinary manures now in common use.

Mr. Hale is quite correct in reference to variety of fertilizers. No crop requiring a soil rich in nitrogen can be expected to flourish on nothing but potash, but in very many instances, soils rich in nitrogen may be benefited by an application of potash, but the potash can not possibly be substituted for nitrogen. We allowed Mr. Johnson's article to pass, because we believed it would be of practical benefit, as in most instances our garden crops are benefited by an application of potash.—[Ed.

Curculio Proof Plums.

Professor Budd, of Iowa Agricultural College, says:—Some varieties on our grounds are practically free from injury. Among our natives I will name De Soto, Wolf, Wyant, Magnoketa, and Forest Rose. Among the Russian plums the early Red has never to any knowledge lost a specimen. I found last year, and this morning, a very few marks of the pest, but no living larva has been found, and the marks scarcely make a blemish. The idea has been advanced that the little Turk damages least the sorts that make very rapid and succulent growth early in the season. This may prove correct as the early Red blossoms with the De Soto, but at this time it is fully four times as large. The same is true of *Prunus Simoni*. It grows very rapidly and is four times as large now as some sorts much stung by the curculio. Upon examination this morning I fail to find a single larva and but one specimen out of twenty, perhaps, shows a faint mark where the puncture was made. A native plum I did not include in the above list was brought from near Chippewa Falls, Wis., and is known as "Chippewa." It is always loaded with plums, even at two years old in the nursery, and rarely shows a curculio mark and never a larva that I have seen. It also has the habit of rapid development of fruit. Although not as large as Wolf when mature it is now double the size of that variety.

The Apiary.**Bee-keeping With or Without Other Pursuits.**

BY R. F. HOLTERMAN, BARTFORD, ONT.

A question which has received much attention is: Shall bee-keeping be combined with other pursuits, or shall it be followed alone? At the present day, there is no doubt that the majority of bees are in the hands of farmers, and while we must take things largely as they come, no doubt benefit may be derived from a proper discussion of the question, and if it can be shown that bee-keeping should be followed alone, no doubt it will be the means of inducing some to do so, and induce others to drop that branch of farming.

For any business it is necessary that it should be the means of earning the one engaged in it at least a livelihood. Can this be said of bee-keeping? Taking an average of years, no doubt there are but few who will not admit that bee-keeping will give one who understands it a living, and perhaps something more. At the same time, we must admit, than a season may come wherein the honey harvest may fail to visit us, when we must even feed our bees for months. We must do this, or almost as bad at times, the second and even the third season. When this is the case, it begins to appear that bee-keeping will not do as the means of support solely. Of course, some may argue that such does not occur frequently, and that one first-class season will make up for several poor ones. Granted; yet what shall we say about those who embark in it and have not sufficient means to be able to do without an income for several years. Such will admit that it will not do for them to keep bees alone. Many farmers can no doubt keep bees to advantage if they have a large family; some can watch the bees during the swarming season. Any child can do this, and the farmer can, in case of failure in this, do as he does in case his wheat crop or barley crop fails.

There are a few shoals upon which the farmer frequently wrecks his apiarian prospects. He

will not watch his bees, but allows swarms to abscond. As the new swarm is the one which generally gives the bulk of the honey, such an accident means the loss of most of the crop, and the unfortunate farmer may think it is a poor season for honey when his surplus may be found in some bee-tree in the woods.

Again, others will take away all the honey they can, trusting to luck that enough may remain for the bees. This too often means starvation, and the unlucky bee-keeper finds his bees have been lost in wintering.

Again the moth is said to destroy many colonies of bees. For this there is not the slightest excuse. They are the Black or German bee every time. In an apiary of 100 colonies, there may often for the entire summer, not be ten millers found. Keep Italian, or bees with a heavy dash of Italian blood, and you need not fear the ravages of this insect. Keep your hives far enough from the ground to allow the air to circulate underneath them, this keeps the hive dry and free from decay.

Swarming.

The following article in the *American Bee Journal*, by F. Coverdale, will be of interest: "Do bees select their home before swarming?" is a question that is of at least some importance to the whole bee-keeping fraternity. The loss of a great many swarms is vested here. I do not know whether all swarms send out spies or not, but even inasmuch as one swarm does, we will take it for granted that all that swarm under a normal condition will do the same, though, in my opinion, they do not all succeed before swarming.

For five successive years I placed in a certain oak-tree, a box or nail-keg, and every year except one there came a swarm into these kegs and boxes. As I was plowing corn or making hay each season near this tree, I could see quite easily just about what was going on during nearly all the swarming season. At first I would see perhaps one bee, after that the number would increase, and one not posted would be very apt to think that there was a swarm in the keg. They would usually protect and clean this keg from one to three days before they would take full possession; at other times they would come in great numbers, and in due season disappear, in which case they had been captured, or found more suitable quarters.

Place a keg in each of two trees forty rods apart, and the same swarm will hunt through both of them, and make their choice. I do not think that there were any chemical changes taking place in these kegs, as Mr. Demaree mentions on page 456 of the *Bee Journal* for 1888. Nature does not intend to send the busy bee wandering from place to place, just happening to come across a hollow tree or log. Let any who doubt this, do as I have done, and they will be sooner or later convinced.

Swarms that have chosen a new home close by, are very apt, when swarming, to rise high up in the air, and go quickly, never stopping to cluster, as they have a string or trail of bees all the way from the hive, or swarm, to the new home—the less the distance, the more bees on the trail, or the thicker they fly; thus the further away, the better are the chances for them to cluster, for these bees flying back and forth have quite an influence on the swarm. It was such cases as these that so strangely induced me to adopt the method of clipping all of my queens' wings; for there is no one thing pertaining to bee-keeping that puts me more out of patience than to have a portion of my swarms leave me; for in so doing, there goes the profit.

Experience with Dividing Colonies for Increase.

I began the season of 1889 with nine colonies, all having been wintered on the summer stands, and came through seemingly in good condition. Having read so much on dividing colonies for increase, I decided to try both plans to satisfy myself as to the better one, and I am now prepared to give a few items from experience.

While I find that those colonies left to swarm as nature intended, have not increased as rapidly as I would have them do, they are all strong and thriving colonies, ready for the harvest at any time the honey flow may come; while, on the other hand, those worked by dividing, are greater in the number of colonies, but shorter of stores, and not half so populous.

Still another objectionable feature that accompanies dividing, is the starting of robbing, which I have had to contend with to my own vexation, almost causing me to fully decide in favor of increase by natural swarming; by this means, we will—if we are awake to our duty, and keep all colonies queened, allowing no weak ones in our apiary to give robbers a start—exclude robbing to a great extent.

My bees were so very deep in the rut of robbing at one time this spring, caused by nothing more nor less than dividing colonies, that I could hardly go into my apiary without getting stung, or at least being told by some angry robber bee that my presence was very offensive; and in the meantime they were killed in front of the entrances in great heaps. I soon saw that this must be stopped, therefore some speedy work must be done.

With the foregoing views before me, I proceeded to shut up all weak colonies, but this did not answer, for the robbers proceeded on some of my strongest colonies, and then came the "tug of war"—dead bees were strewn all over the earth around the apiary. What must I do next, but close all entrances of hives that showed the least signs of being robbed, to a bee space, and cover the hives with wet cloths, and throw wet weeds and grass over the entrances? By this means I kept the hives cool, and to some extent, excluded the robbers from the entrance.

After going through all this trouble and vexation, I am very glad indeed to say that my bees, at the expense of many lives, have decided to behave themselves, and get about their business. I hope never to experience another such a "riot" among my bees; and in order to do my duty to prevent it, I hardly think that I will ever divide another colony of bees. Perhaps some of my readers will think that I have changed my mind in this direction very suddenly, which indeed I have, I must admit; but in answer to this I will say, of what use is purchase experience, unless one profits thereby? Mine cost me dearly. —[Cor. A. B. J.]

Societies for the prevention of cruelty to animals ought at once to set about the creation of a healthy public sentiment in regard to the fashionable patronage of the inhumanity of caponizing fowls. So long as the patrons of the cruel practice stand ready with open purse to buy capons at a price beyond the value of good table fowls, so long it is idle to reason with those who profit by the practice. That from 10 to 25 per cent. of the fowls die in the operation does not deter an operation in the least, for he has the dead fowls and gets the full present value for them. The responsibility for the practice rests upon those who patronize it, and probably very few of them know anything of the terrible cruelty which their delicate sense of taste encourages and supports.

Poultry.

Broodiness.

During the warm weather of August very many of the hens will be seized with a desire to incubate, and at this late season it will not be desirable to use them for that purpose. The best way we have found to turn their attention in another direction, is to confine them in a small well lighted coop with a vigorous young male.

The Breeding Season—Care of the Young Stock—Poultry for the Farm.

BY W. C. G. PETER.

The past season has been one of peculiarly mixed weather, and reports received so far have been of "A poor season," both in the States and Canada. In many cases we have received notice of great mortality in the young stock soon after hatching, without any apparent reason. One breeder writes us, that about sixty per cent. of his chicks "died off without any reason at all," but as he expressed it, "the little beggars just laid down and died for the fun of the thing." But in our experience a season so irregular in its course as this just past has been, is not conducive to the best results in young stock of poultry.

The season of exhibitions will soon be upon us, and from this time particular attention should be given to preparing all stock intended to be sent to the show-room. One of the most important matters to attend to is the weight and consequent size of the specimens, especially in turkeys. If practicable all males should be separated from females in both young and old birds. This will add greatly to the plumage of the females, and keep the cocks in better weight and style. They may "mope" for a day or so when deprived of their companions, but will soon get over it and take on flesh, and look better in every way. If the birds are not for exhibition it will still help them, they will get in better condition for moulting, and moult weeks earlier if separated. We are indeed pleased to find that our farmer brethren are taking so great an interest in poultry matters; it is a profitable branch of the farm business if intelligently managed. No farmer can make much over his expenses out of the mongrels that used to be, and are still, found on many farms. Many are inclined to consider one hen as good as another, and so they are, of the ordinary mongrel breed; but few trouble themselves to know whether the stock they carry from year to year is old or young, and some that I have seen of late are venerable indeed. By carefully selecting the oldest birds for the market every fall, the egg product on the farm could be made up fourfold.

We wish to interest the farmer in this poultry industry sufficiently to cause him to get for his wife or some member of the family who likes poultry, a few good breeding birds of any hardy, thoroughbred stock. These can be purchased from this time till fall at a nominal cost. Get your wife some poultry that she will feel a pride in, let her have a decent house for them, and you can enjoy your new-laid egg winter and summer. Turkeys and ducks are especially farmer's poultry, and the thoroughbred turkeys will actually double the weight of those usually seen on the farm. A fine flock of bronze turkey poult will not cost more to keep, and will bring double the price in the market.

In my own experience, talking much with farmers, their wives and families, I find that it is generally the head of the house who is to blame for lack of good poultry and convenience for keeping them. The ladies are more fully alive to the value of the flocks. They estimate more at its value the products of these despised creatures, as to their importance in furnishing the table with many dainties, nourishing and palatable, and without which they could scarcely provide a change in the bill of fare. Our object in alluding to this now, is because after the breeding season is over the adult stock can be purchased for a much smaller sum than usual, the breeder being anxious to make room for the young stock. Give the ladies a chance to make poultry pay, and be at the same time a kind of stock they can show their friends with the same pleasure and pride that you exhibit to your own chums your thoroughbred "Suffolks," "Durhams," or "Clydesdales."

Poultry on the farm should be religiously exclusive,—only one variety. The labors of farm life make it almost impossible for any one to give the time necessary to keep the different breeds distinct and separate. The beauty of a flock similar in marking, size and style, needs to be seen to be appreciated. Any one once accustomed to it finds it an eyesore to see around him the indistinct coloring, "gawky" or "dumpy" shapes and general lack of style found in the mongrel stock. Another bad item, too, is the using of the same male year after year, or after he has done his duty, and is found some season to have no wish to perpetuate his name and race, to breed from one of his own sons, thus injuring the stamina of the flock and reducing the profit in every way: smaller birds, fewer eggs, chicks less vigorous and in fewer numbers, are the result of this carelessness in the breeding stock, and it would be called madness in any other branch than poultry.

Poultry Points.

Mrs. W. H. H. Bradbury, Hamonton, N. J., hatched two strong and lively chicks from a double-yelked egg. Ducks don't have lice—the oily nature of their feathers is proof against it. Hens that lay late in the afternoon are apt to be broody first. The "non-sitters" nearly always lay in the morning. Do not yard geese and ducks together. A drake and a gander have two different dispositions. Do not let the fowls out of their house in the morning before the sun is up, as it is often too damp. Do not let the chickens out in all sorts of weather—croup is too easily caught. The white fowls have the largest sale of the fancy. Eggs turned twice a day will keep twice as long for hatching. For a swollen eye, bathing with cosmoline (vaseline), twice a day, is excellent: it is better than lard. Never kill a fowl for the table shortly after it has been fed: we prefer killing the night before. Cut straw makes a good nest: we use excelsior: it comes in boxes of dishes received by your grocer. Plant fruit trees in your henyard. Ain't you sick of hearing that?—but you must remember it. Dig around your henyards and give the fellows something to do: exercise is a great thing to them.—[Germantown Telegraph.]

The average boy's life on a farm is not altogether an enjoyable one. He rises early, works hard all day, finds himself too tired at night to enjoy reading or other intellectual pastime, goes to bed, rises early again, and drudges on in the same routine, usually with no pecuniary interest in the enterprise. Set apart a few acres for fruit growing, and give the boy sole charge of it, with all or a share of the profits. If this does not brighten the boy and tie him to the farm try him on poultry or fancy cattle. Every boy has a leaning towards some pursuit, and it is the father's duty to give him an opportunity to develop his peculiar faculties.

French Fattened Poultry.

New York epicures have well-nigh gone wild over these milk-fattened broilers and capons, or "wet-nursed" chickens, as a Washington market dealer called them. The fattening process is said to improve the texture and flavor of the meat, as well as to increase the weight of the fowl. The flesh is certainly delicate, juicy and tender, light in color, and most deliciously sweet and rich. The idea, though previously brought from France, has been put to practical use by Mr. W. C. Williams, late business manager of the Paris Daily News, who has located a plant for the production of French fattened poultry at Olean, New York. An old skating-rink has been made over for the purpose, a surface of 11,000 square feet being used for the feeding department alone, besides separate departments for preparing the fowls for market. The great feeding room, which is kept as still and as dark as night, can accommodate 12,000 head of poultry at once, and when fully completed will turn out six hundred fowls daily. The business is thoroughly systematized, and the place kept scrupulously clean and neat. The cost, when completed, will approach \$85,000; 450 gallons of milk and 300 bushels of grain will be used daily. Some account of the feeding apparatus, which is a French invention, and accurately regulates the amount of food in accordance with the age and class of the fowl, and which may be of interest to our readers, we clip from the Olean Times.

The machinery consists of a series of large revolving upright cylinders, twenty feet in circumference and eighteen feet in height, with boxes or stalls for 300 fowls each. These boxes are arranged in tiers, one above another, and the fowls are placed in them in comfortable positions, but securely tied to prevent escape. Here the birds remain for twenty-one days, in the dark, with no noise or disturbance or opportunity for exercise. Their whole business is to improve and increase the quality of the meat, and nothing is permitted to divert them from that object. They are fed three times a day, and with unvarying regularity and precision. The feeding apparatus is novel. It consists of a platform elevator, with a trough containing the feed, and a force-pump, to which is attached a rubber hose and nozzle, bent in the form to exactly fit the fowl's mouth and throat. The feeder, standing upon the elevator, opens the chicken's mouth, inserts the nozzle, presses upon a spring, and the feed is forced into the chicken's crop. The process is perfectly painless, and the chickens appear to enjoy it. When one fowl is thus supplied, the cylinder is turned to the next, and so on through the tier, and then the elevator is raised to the next tier above, and in this manner until all the fowls in the cylinder are fed. The feeding apparatus, which is a French invention, accurately regulates the amount of food in accordance with the condition, age, and class of the fowl. The food is carefully prepared from the choicest cereals and the purest of cream and milk, and is in the form of a thin batter. It is highly nutritious, and rich in fattening pro-

erties. The formula of the food is a secret of the business, and covered by patents. After the fowls have been in the fattening cylinder for twenty-one days, they are taken out, killed, dry-picked, and carefully prepared for market.—[Poultry Monthly.]

Artificial Incubation in Egypt.

The following interesting particulars of artificial hatching in Egypt are from the pen of Hon. John Cardwell, United States Consul at Cairo, Egypt. The first paragraph below is especially interesting, as showing a radical difference between Egyptian practice and American theory. Is it possible that the difference of four degrees in the temperature in incubators will account for the difference between Egyptian and American success? The attention of incubator experimenters is called to these very important points:



FRENCH FATTENING PENS.

1. No moisture is used in incubators during process of incubation. Its use is considered destructive of egg vitality. The first object is to drive out all moisture, and then to sedulously keep it out.

2. Temperature in the incubators is kept two or three degrees above blood heat, hardly ever above 100 and never beyond 101. The attendant within is himself as reliable as mercury. The eggs are turned four or five times daily, beginning from the time the eggs are thoroughly warmed and continuing until the chicks begin to break the shells. The infertile eggs are detected while turning the masses during the first three days.

3. When the chicks are out of the shells they remain in the ovens to be strengthened by their warmth. Wet and cracked grain is scattered on the floors for them as soon as they can walk. They begin to pick at it and soon eat well. Water is also placed for them as soon as they are

strong. The chicks, when taken away, are reared by hand. A woman sometimes looks after a brood of 150 or 200 or more. They soon learn to follow her into the field. I have seen them thus working for a living. They know the woman's call and abide it. To give the chicks to hens would destroy the economies of the Egyptian system. The women, too, keep away the kites and look after the health of the broods. There are no artificial brooders for the young chicks. The incubatory keeps them warm, and the women, when they are taken away, attend to their comfort in their dwellings, such as they are. The houses of the fellahs are dwelling houses for people, cattle, sheep, goats, camels, donkeys and fowls; and brutes and fowls are more carefully watched over than the children.

4. Disease is almost unknown. The dryness of the climate is the cause of almost universal health among fowls—at least, that is my opinion. Mites and lice are, I think, produced mostly by fowls while sitting; and as fowls are rarely permitted to perform the process of incubation, this is a decided exemption in this respect. The growing chicks are carefully watched, and if parasites appear the whole brood may be seen minus all feathers, except those of head, wings and tail. I have seen the process of denuding being performed. Each chick is taken and absolutely picked alive.

5. There are no standard fowls, excepting a heavy, awkward-looking Game, similar somewhat to the Sumatra Game, which the eunuchs about the harems rear for fighting, where they make and lose much money. The common fowls are small, smaller than the common dunghill of America. But they are great egg producers. I do not suppose any one in Egypt could give statistics concerning hen production. There are no eggs here worth shipping abroad for incubation.—[Texas Farm and Ranch.]

Poultry Yards for Fruit.

There is no reason why poultry and fruit should not be conducted on the same ground. The poultry yard gradually becomes exceedingly fertile, and it is better to have something growing in it than to simply devote the space to the hens. True, the hens will not permit of the growing of vegetables, but plums or peaches can be grown with advantage. Experiments have shown that the curculio does less (if any) damage to plum trees in the poultry yards than in any other location that can be selected. The peach tree is not only protected by the hens from the borer, to a certain extent, but there is also less liability of the "yellows" appearing on the trees. One advantage in selecting plum or peach trees is their rapid growth. A peach tree will bear when it is three years old, and the beginner in the poultry business can, by the time he has been enabled to raise a large flock, with eggs and poultry ready for market, have a crop of fruit ready at the same time. Make every inch pay, and to do this grow as many crops as possible.—[Farm and Garden.]

Don't forget to wash the perches with a weak solution of carbolic acid every two weeks during the hot weather; it is death to insect life.

Soints and Shelps

In Iowa a farmer is graded by the number of acres he works; in Michigan by the number of sheep and cattle; in Ohio by the number of acres of good wheat; on Long Island by the number of cauliflowers, or the size of the asparagus plantation; in Vermont by the number of maple trees tapped annually; but in Cranbury, Middlesex County, New Jersey, his capacity as a farmer is gauged by the amount of fertilizer he uses per acre.

A contributor to the American Agriculturist says:—"English economy in manure would make the American farmer rich." There is no doubt that the farmer who succeeds in future must keep up with the times, and feed not only the waste grains on the farm, but must grow fodder crops largely, and feed them for best results directly, and in manures as well. The fertility of the soil must be maintained, and in many instances increased, or the farmer must go to the wall.

Probably the hardest part of editorial work is to condense contributions, eliminating what is not of importance to the general public, without beclouding the meaning of the writer. Many contributors write as though they thought it would be a great benefit to the editor to help fill his columns. Now, while every editor in the country is thankful for short, pithy contributions, there is nothing more exasperating than a two column article with a quarter column of ideas sprinkled through it.—Selected.

It is noticeable that the new States recently admitted into the American union are made out of territory lying along the Canadian border, while the territories farther south, Idaho, Wyoming, Utah, Arizona and New Mexico have not been developed sufficiently to warrant their conversion into states. The reason is self-evident. The nearer the Canadian boundary the better the land for agricultural purposes. It is gratifying to know that on the Canadian side of latitude 49 the land is still better, and grows the greatest grain in the world.

We are continually receiving letters asking an answer through the columns of the ADVOCATE, many of these do not give the name of the sender, being signed a subscriber, constant reader, etc. We cannot answer any questions without the full name and address. If writing the business office, and asking a question in the same envelope, write name and address on both sheets of paper, as the question will otherwise reach the editorial rooms without a clue as to the sender. In sending plants or weeds for naming always enclose stamp for reply.

Beware of the water that in the cool of the morning is pumped from the well into a brown gallon-jug, corked with a corn-cob, carried to the corn field and set among the slough grass till wanted. For the first few draughts its contents are refreshing. Soon, however, the water heats up a little and at length runs down the parched throat of the hired hand or farmer's boy like hot oil. Such drink is decidedly dangerous. See to it that the field hands are supplied with cool water at proper intervals, and such water should contain some adjunct—oatmeal, ginger, lemon or other useful and mild thirst quenchers.

If any person were to chain an animal to a stake in the field and leave it to shift for itself until it gets thin and decrepit from loss of flesh and strength the humane society would be after him with properly deserved punishment. Yet this is precisely what thousands of farmers do with their orchards, of course barring the difference between the insensate tree and the living animal. And yet even for a tree there must be something akin to pain in the process of slow starvation—the seeking by exhausted rootlets of food that can not be found. It takes an enormous amount of various manures to form fruit and seeds.

I am much pleased with your valuable paper; it is worth many hundred cents on the dollar to me.—J. W. BESSEY, Mt. Forest, Ont.

Family Circle.

Farmer John's Soliloquy.

I mout as well acknowledge, 'tain't no use o' beatin' 'round, I've done a heap o' thinkin' plowin' up this faller ground, An' suthin's been a painin' an' achin' me like sin—I reckoned 'twas dyspepsy or malarly creepin' in.

At last I got my dander up, an' to myself sez I, The biggest fool in nature's him that tells himself a lie; I've been lettin' on 'tis malarly, an' my stummick, when I know

It's my conscience that's a hurtin' an' worryin' me so.

I've been a shirkin' this here thing for thirty years or more, An' I orto had this shakin' up an' settlin' down afore.

I've been honest fur as payin' goes, not a penny do I owe, But the kind o' cheatin' that I done, was the kind that didn't show.

My mind goes back to Hanner, when I fetched her here a bride— No apple bloom was sweeter, an' she nussed to my side

Like she thought she had a right to, an' could trust me without fear For the love I never hinted at for more'n thirty year.

There was churmin', bakin', bilin', there was nussin' an' the rest From long afore the sun riz 'till he slumbered in the west;

An' when the rest of us was done an' lollin' round on cheers, Hanner was recuperatin' with her needle an' her shears.

But when the life was ebbin' from that faithful, patient heart, I had to face the music—I hadn't done my part; And I couldn't help a thinkin', watchin' out that weary life,

That there's other ways o' killin' 'cept a pistol or a knife.

It sounds like sacrilegion, but I knew jist what she meant As I whispered, "Fly to meet me when my airthly life is spent"

"I'm tired, John, so tired, but I've allus done my best, An' I may feel more like flyin' when I've had a spell o' rest."

—Amy Hamilton in N. Y. World.

AUNT BECKY'S CURE.

BY SARAH BIERCE SCARBOROUGH.

"Henry, Rue does not seem at all well. She has been growing pale and hollow-eyed for some time; and now she does nothing but mope about and read and sigh. I don't understand it."

"I had not noticed it, Ellen. Perhaps she reads too much, I see she is a perfect bookworm. It rather runs in my side of the family to be literary and I have thought Rue was inclined that way too."

"I can't imagine what ails her. She seems low-spirited and unhappy, and she surely has no reason to be so."

"Of course she hasn't Ellen. What an idea—a girl not yet sixteen unhappy! It must be her blood is out of order. Spring is here and she needs some sort of tonic up. Let Dr. Miles fix up some sort of tonic for her."

"I've been thinking that perhaps a change of air would do her good. What do you say to sending her out in the country to Becky's! The fresh country air must surely help her; and I am really too busy with all my household cares to care for her properly."

"That is just the thing, Ellen. Why didn't you think of it before? Becky will be in her element to have some one to coddle. She used to dose me the whole time when I was small, and she cured me quicker than a doctor could do. Send her to her at once."

This was the conversation I overheard between my father and mother as I lay upon the sofa in the parlor.

I was delighted. But it was not so much at the prospect of going to aunt Becky's as I was at the fact that the family seemed at last to be convinced of my declining health. For nearly a year I had been suffering from what I felt to be a neglect to comprehend the workings of my finer nature, mental and physical, and I had been growing most delightfully miserable. I was a great reader as my father said; and the class of books I enjoyed most was that of romance—wherein the heroines were pale, and sad-eyed, sickly and interesting, full of trouble and woe, and who pined away from various causes, such as unrequited affection, an unsympathetic world, and a general misunderstanding of their inner longings by those who surrounded them.

I doted upon poetry, and the more dismal and soul-harrowing and obscure the more I doted upon it. I was particularly fond of those passages which referred in vague terms to early death, though I could not have explained what there was about them that gave me so much pleasurable pain. I only knew, as I have said, that I was delightfully miserable. I had tried to be as much like my heroines as possible. A copious supply of chalk, cloves and slate pencils, in which I indulged my appetite secretly, had aided me in it so far as to cause me to grow quite pallid. My features were near enough to the regulation type not to be a source of anxiety to me; and hair and eyes being black as the "raven's wing" and a "sloe," individually, I considered it unnecessary to attempt any improvement on nature in the former, while the latter I simply pencilled about the eyebrows in order to make them more lustrous. As a consequence my countenance at this time was quite striking. So it pleased me much to see that I had attracted attention to my decline.

The next few days were occupied in preparations for my departure to Aunt Becky's. The suddenly awakened family solicitude at my condition was evinced by indulgence in all the luxuries—fruits and other delicacies—which could be procured, while the younger children were repeatedly told to "wait on sister Rue while she is here;" and the ambiguity of this command was as gratifying as the constant attendance which all danced upon me for those few days.

"She can hardly last through another winter," one caller said to another in a guarded whisper, thinking me asleep in the hammock outside the window.

She need not of guarded the remark at all, for it would not of troubled me in the least. I was lying meditating upon the affinity of souls and my lack in finding one in this world to respond to my own; and such a thing as not lasting through another winter was perfectly in accord with my pleasant thoughts just then.

Not that I was so miserable that I wanted to die, but that it was part of my programme to die young. Did not all my favorite Arabellas and Etheldrads do so, or came so very near it that it amounted to the same thing as far as sentiment was concerned? And as for reality I thought very little about it. Death in the abstract was what held fascination for me.

So in this frame of mind I started for Aunt Becky's, accompanied by my father, who, as he placed me in her care at the country station—for he had to return immediately to the city—said to her in an undertone:

"Becky, do all you can for her. Cure her if possible; but humor her, as she seems not long for this world."

She gave a sharp glance as she seated me in the low basket phaeton and gathered up the pony's reins; and she kept up her swift glances as we rode out to the farm, varying them by occasional terse questions.

"Been sick long, Rue?"

"For nearly a year," I languidly replied.

"What's the matter?"

"I don't know."

"Have aches and pains or cough?"

"No,—that is, not much. I had forgotten that a cough was usual in case of decline, and forthwith proceeded to give a little one—a very unnatural one I felt it to be at the time.

Another sharp look.

"That ain't any consumption cough! Well, how do you feel, any way?"

"Oh, Aunt Becky, just as if it would be perfectly heavenly to lie right down and die."

My far-away look as I contemplated the blue sky, was intended to settle forever the question as to my condition; and it seemed to, though not in just the way I had expected.

"Fish!" was her contemptuous ejaculation.

"Die! Well you ain't going to just yet—not from anything you've got now."

I had no chance to reply to this unfeeling remark, as we had reached the farm.

For several days I was doted idly around, swinging in the hammock I had brought with me, arrayed in clinging white wrappers and slippers. When the weather permitted I took my naps out of doors in the most approved attitudes—a book of poems clasped in one hand, one arm thrown gracefully above my head while the other hung limp by my side, and one slippered foot peeped from beneath my skirt over the hammock's edge. I felt that my affinity might possibly hover near me unawares, and it behooved me to keep my lamps always trimmed and burning; for even if I could not live, we must at least recognize each other—and how could that be if I did not live, while I lived, up to my ideal?

But a few days after my arrival, ready for my day-dreams, I missed my favorite poems; in fact novels as well were gone.

"Where are my books, Aunt Becky?" I asked, as she was about to drive to the village.

"I've put them away. The doctor says you mustn't read much," she answered as she drove off.

I had not heard of that edict before; but I knew some poetry by heart and that would do as well; so I lay thinking—my breast swelling with emotion as I made myself the heroine of a most romantic tale passing through my brain. My eyes were wet with tears and I was sobbing with the excess of emotional excitement to which pitch I had worked myself when she returned.

"What are you crying about, Rue?" she brusquely exclaimed.

"O, nothing! only—" I paused undecided how to express myself.

"Only what? Homesick?"

"No indeed, Aunt Becky! but you can't understand me. It is delightful to cry sometimes. I do love when I am alone to lie and think and—feel that's all."

"Fiddlesticks! Well, I got something to-day for you to take that'll make you feel—better," was all she said.

That night she came to my room. "Two of the slats are out of my bedstead, Rue; I guess I'll have to sleep with you," she announced, tying on her night cap as she spoke.

"What's these?" "She had opened one of the bureau drawers in an ostensible endeavor to close it properly. "Only some soft slate-pencils I have with me." I answered faintly.

Well, now, child, I'm going to take them every one. I ain't going to have you fingerin' one bit while you are here," she shrewdly remarked as she confiscated my whole stock upon the spot.

"Cloves! too. Why, Rue, your ma must've sent these to me. Enough to last a housekeeper a year, and I want some in my pickle to-morrow! I'll take them right out, because you don't want your clothes all scented up by them—sweet clover's best for that."

I could not say a word, but I wondered how I should keep up my pallor without those condiments to nibble. Then, too, how was I to enjoy my sentimental soliloquies which often kept me awake far into the night and left me so enterprisingly wan-eyed in the morning? I should have to forego this sorrowful happiness, or happy sorrowfulness, with which my romantic imaginings filled my solitary hours, if Aunt Becky was to share my privacy.

But she did not seem to dream that she might be intruding. She chatted on in her cheerful, quaint strain until I found myself laughing in spite of me. She kept it up, too, far into the night until I dropped asleep—too utterly exhausted to answer her frequent question: "Gone to sleep, Rue?"

It was five o'clock when I was awakened next morning.

"Rue! Rue! it's time to get up. Here is a dress, and a pair of shoes I want you to put on and come right out with me."

She would not let me lie a minute longer, and I had to obey; so I slipped on the gingham dress, which was a surprisingly good fit, and the thick-soled shoes, and followed her out into the garden.

Now Rue, there is any amount of work to be done 'mong the flower-beds, and I've got to take mornings to do it in mostly, and I must have your help. I got these yesterday just for you to work with. They ain't heavy, and we'd better get right to work for a pansy bed first thing. I've got seed enough for a big one and they are beauties too. You dote on pansies, you know."

She had opened a neat box of light garden tools as she talked and now handed me a rake. I did dote on pansies, and urged on by her example and cheery talk I raked away in the mellow earth until breakfast time and went in absolutely hungry.

Day after day she kept up this course. She gave me hardly a minute alone, and she had me read aloud to her when I wanted a book.

"I haven't time and you must read much the Doctor says; so we'll have to carry it out together," and she produced "Huckleberry Finn" which she alternated with "Rudder Grange;" so that, between the remarkable humorous adventures in the former and Pomona's performance in the latter, I had no time to think of love or sentiment except in the most ludicrous light. Then the flower-beds needed so much hoeing and scratching and weeding, and the old pansy bed opened up in such marvellous beauty that I began to be quite worried for fear the new one would not rival it; so renewed hoeing and weeding had to be kept up. I had to keep on my thick shoes for it was supposed that the dog had carried off one of my slippers, and my hammock came to grief and uselessness by the calf's chewing a big hole in it; so that really I was obliged to do nothing but work out in the garden day after day, and how my flowers grew!

My pansies out-rivalled the old ones, and I forgot everything, even my affinity, in the delight of watching for the new faces which peered up at me from the velvety blossoms and I was too tired when night came to moan over myself, much less any Arbellia or Ethelinda, so sound sleep visited me quickly.

About the time I had reached this state and could out-rival Aunt Becky in dressing and reaching the flower garden in the morning, she found time to fix up her own bedstead and leave me to my privacy again.

It was late in the fall when she said to me one day:

"Well Rue, do you think you'll last through the winter?" "Last! Why, Aunt Becky, I wouldn't do anything else for the world!" was my convulsive answer for it actually struck a pang to my heart to think of dying.

"Well, I guess your folks want to see you home by this time," and home I went, Aunt Becky with me.

They were all ready to receive me—with pillows in the carriage and tender, sorrowing faces. She had done all the corresponding as I did not like to write letters, and had done it as she pleased. So when I rushed in upon the family with my red cheeks and face as brown as a gypsy's, they could not have been more astonished if I had risen from the dead.

"I said you could cure her if anybody could!" father exclaimed in delight that night.

"But what did you give her, Becky?" my mother anxiously asked.

"Tools!" was her sententious answer.

"What?" "Tools—rake and hoe and spade and trowel!"

gingham dress and thick soled shoes;—took away the cloves and pencils she was eating till she looked like a tallow candle;—hid her love-sick stories and death-wishing-for poetry and gave her something to laugh at instead—let the calves eat up her lazy hammock and broke down my old bedstead so's she couldn't be alone a minute to cry and take on over her sentimental fol-de-rol;—turned her right out into the open air and let the sky and the breezes and the flowers help me out in it."

"Was that all, Becky?" Mother was so surprised that she could not find anything else to say.

"Wasn't that enough as long as I cured her?" "And do you mean to say that she was not going into a decline at all?" mother urged.

"Yes, and no. She hadn't any disease that's down in the books, though I don't know what eating that stuff would have done in time. But she was declining fast into a foolish, sentimental, romantic simpleton, with all her ideas of love and heroines and affinities and death, and she might have declined by this time into something worse, for she was fast getting where she could have been most easily led into something she would have had cause to regret perhaps all her days. Queer, that mothers can't see such things!"

"Why, Becky, how you talk! I had never thought of that!" Mother was horrified as well as alarmed.

"Yes that's just it. You were too busy with your household affairs and, like most women, thought if anything ailed your girl, it must be something for the family doctor to prescribe for; so she was drifting right on down to ruin, like enough unless her own hard sense got the better of her in time;—all just because you didn't try to understand her. But Rue's cured, I'm sure; now see you don't let Bess get on the same decline, that's all."

And Bess did not. Mother was awakened in time as well as I. I did not lapse into another decline; and mother saw to it that the other girls were safely guarded by her enlightened eye through the dangerous romantic period for which she found Aunt Becky's to be an infallible cure.

Gems of Gold.

Who speaks, sows; who listens, reaps.

A lady should never keep a visitor waiting.

Man's soul has no portion in the fruits of the field.

The more honesty a man has, the less he affects the air of a saint.

Never seek an opportunity for revenge, nor embrace it when it comes.

A wart can be removed by touching it several times a day with castor oil.

We failure our failures in life on fate, but take to ourselves the credit of our successes.

I'm not denying the women are foolish; God Almighty made them to match the men.

Never be such a slave to yourself that an ungratified wish will disturb your peace of mind.

Do not borrow from your good deeds of yesterday to make up for your lack of diligence to-day.

By the life of many we see what human nature is, and by the life of One what it may become.

It is a grand mistake to set up your own standard of right and wrong, and judge people accordingly.

Sleep has been fitly likened unto death, only there is this difference:—We wake from sleep in our own image, but from death in God's.

A more glorious victory cannot be gained over another man than this, that when the injury begins on his part, the kindness should begin on ours.

A man may have the riches of this world, and yet be miserable; but he cannot have the riches of Christ without being happy. We never have reason to question the wisdom of God's dealings with us, but often to doubt our own interpretation of them.

We should judge a man's life as we do a landscape, not by looking at one part only, but at the whole; for, as it is not necessary that all the objects be beautiful in order to have a delightful landscape, so it is not necessary that all a man's actions be good in order to have a noble life.

Educate the girls, and the boys will soon be there. So long as girls are willing to associate with tobacco and whiskey, with low aspirations and evil practices, so long the boys will gravitate to that level. But when the girls demand fewer cigarettes and more brains, when they ask honor for honor, purity for purity, when they will have the steady nerve and strong muscle of total abstinence, the boys will soon see light in their light and begin to climb to a higher plane.

Minnie May's Dep't.

Women's Work.

What can a helpless female do? Rock the cradle and bake and brew; Or, if no cradle your fate afford, Rock your brother's wife's for your board; Or live in one room with an invalid cousin, Or sow shop shirts for a dollar a dozen, Or please some man by looking sweet, Or please him by giving him things to eat, Or please him by asking much advice, And thinking whatever he does is nice, Visit the poor (under his supervision), Doctor the sick who can't pay a physician: Save men's time by doing their praying, And other odd jobs there's no present pay in. But if you presume to usurp employments, Reserved by them for their special enjoyments, Or if you succeed when they knew you wouldn't, Or earn money fast when they say you couldn't, Or learn to do things they'd proved were above you, You'll hurt their feelings and then they won't love you.

—Journal of Woman's Work.

MY DEAR NIECES:—

There is no place like home, though it is the centre of all our cares, as well as our affections; and year after year rolls on, and our sweet flowers bloom again, and days come and go, bringing their own peculiar pleasures and worries. It seems a pity that such an amount of farm work has to be done in the warmest months of the year; but fruit will ripen, and it must be made into jams and jellies, canned or dried; for housekeepers know what a boon a well-filled preserve closet proves during a long winter. I do not think, my dear girls, housework would seem half so disagreeable if proper costumes were made. Too many of my nieces think any sort of a dress good enough to do her work in. Do not make such a mistake. Neatness in dress costs little, and with so many pretty and cheap washing fabrics, no girl need be without two such dresses. Plaited waists, and full, plain skirts—not a flounce is worn—and sleeves just loose enough to shove up, with a large apron made of grey factory, with a bib and two pockets, my girls will make very attractive pictures. Conscious that you are looking pretty and neat, you will not feel a sense of slavish depression that you might otherwise feel if dressed in any sort of an old gown in which you would feel ashamed to let your brother or father behold you. These you can make yourself, and they cost such a trifle, and with a nice agate-ware preserving kettle and self-sealing cans, your preserving operations will be reduced to an art. Keep your sleeping rooms and beds well aired; sounder sleep is insured, and there's much sickness prevented by this simple observance.

Flowers, girls; flowers. Decorate your homes, inside as well as out—if nothing more than a large bowl full of daisies, have them; but even with no flower garden, your rooms can have a profusion of bloom from wild flowers all the summer; and in autumn, leaves and berries, golden-rod, wild aster roses, ferns, and one hundred others within your reach. Why, the low corner of your father's hayfield will furnish you with bouquet after bouquet of wild iris, and numerous white blossoms, which I do not know the name of, but have often gathered, and grasses in abundance—beautiful feathery tops of purple tinge. Just try the effect of a large basin of green fern leaves on your dinner table some warm day; then tell me if the atmosphere did not seem cooler, and your dinner taste nicer for it. Such beauty is within the reach of us all, if we care to enjoy it. That nasty weed known as "mustard" makes a lovely bouquet if mixed

with the bloom of buckwheat and potatoes. Carrot leaves make the loveliest of foliage for bouquets, so does the leaf of the blood beet. And now we are amongst the vegetables, we will mention the bloom of the pea, bean, and scarlet-runner, the blue tuft of mint, the white feathery top of the horse-radish, and best of all, the yellow, lily-like sweet-scented blossom of the Hubbard squash. All these make up into bouquets most effectively, and give to our homes that touch of beauty and refinement that we neglect too often to furnish. MINNIE MAY.

MY DEAR NIECES,—Do we ever reflect, when we feel worn and worried with children, how entirely irresponsible the little creatures are for their very existence, and how apt we are to feel resentful to them as being the cause. They are in no way accountable for their presence here, and we should ever bear that in mind, no matter what worry they are to us. Too often we hear parents complain of being burdened with a large family. Who is to blame, the family or the parents? The man or woman who says their family are burdens to them are cowards, and are doing children a grievous moral wrong. Never reproach them for their presence on this earth, it is not their fault, neither can they help being a worry and expense to you. All children readily respond to affection, and it may be observed that they always give as much as they get, quickly learning to appreciate all the love and sacrifices parents make. But if lack of sympathy, brutality, severity, and want of confidence is shown a child, they quickly perceive that as well, and if they are not entirely little saints they will learn to be sullen, disobedient and unloving. How soon we begin to call them to help us, and what plenty of steps the little feet take in our service, and how much more willingly if the request is made in other language than like stern command. If instead of "Bessie; bring me my slippers," we would say, "Bessie, dear; bring mother her slippers," the little feet would move with double speed to obey. When we think that children's tempers and dispositions are fashioned by parents, there is more to be ashamed of than proud. Never try to break a child's will, reason it out of its stubbornness by a quiet talk, and the little rebel will be more penitent than if he had been punished; and never, as you value your children's love for you, strike them. The memory of that blow is retained as long as they live—and what a thought; "Mother struck me." Avoid punishments as much as possible. If you wait till your own temper cools, the child will go unpunished; for it is to gratify your own bad temper that you punish half the time. A mild, reproving look, or a regret that her dear little Bessie, or Harry acted so, will cause the little hearts to be far sorer than if you had administered a whipping. We need all the sweet memories of home and parents that we can get to carry us through this weary world. But what a long letter I have written upon the very small people. When mother feels tired, just secure one-half hour's sleep; after the dinner dishes have been cleared away is the best time, body and limbs at complete rest on a sofa; sleep will soon come, and you will rise rested, and feeling fortified for the rest of the afternoon. MINNIE MAY.

The flowers of Holland are beautifully formed and exquisitely tinted, but they bloom chiefly in the springtime. Many of our sweet-scented English flowers will not bloom there.

Woman's Notes.

In an American paper, Nancy Jones asserts that "a wife should be submissive, or else get left," on the money question. I believe that nine-tenths of the factors that go to make "marriage a failure," is the unsettled state of domestic finances. In the good old days, our grandmothers went with an unquestioning dependence to her husband's home. This couplet explains the situation:—

"Bound to their fathers until they're made wives
Then slaves to their husbands the rest of their lives."

She did not presume to be able to earn her bread either outside of the family or as a member. Her husband expected to support her, i. e., feed and clothe her; and if the bride brought money or lands, it was immediately seized by him and confiscated. In return the bride performed faithfully the duties of wife, mother, house-keeper, &c., and was, apparently, humbly grateful for the privilege of being "supported."

But times have changed; and the laws and customs regulating marriage, although advancing, are still far in the rear. The young woman of the present has learned her commercial value. She teaches, she keeps store, she has entered and done successful battle in many fields of employment. The girl earns her own living as early and as successfully as her brother earns his; therefore, when she steps from the school-room into a wedded home, her ideas of pecuniary independence revolt at the notion still rampant in the slower brains of man, that the wife is a sort of parasitic growth, "supported" by him.

Does she sit idly and fold her hands? Ask any young house-keeper, which is the easier, her old occupation as bread-winner, or the new as bread-maker? House-keeping and its attendant drudgery do not often prove more attractive than do the usual outside employments of women. And is it more lucrative? To the "head" of the family, no doubt, it is a money-saving institution, for the wages of a house-keeper would soon make a hole in his pocket. To the wife? Well, no. Money could not repay the services of a careful, loving wife and mother. And shame upon that man whose wife must assume an attitude of submission when soliciting the pecuniary aid that is her just due! The woman holds her services cheap who will "tease" or cajole her husband for money which is hers, and should be freely shared. As for earning one's own pin-money, by extra work outside, I think the practice reprehensible, and wholly inexcusable on any grounds except inability of the husband to provide; for, really, should she do her work and his, too?

The doors of divorce stand now all too widely ajar; but better to live alone than under such humiliating conditions.

The mullen weed, so often a nuisance in our pastures, is cultivated in England in private gardens, and very much admired, under the name of The velvet plant of America.

The Palo de Vaca, or Cow Tree of South America, whether considered in reference to its milk, or rather cream, or its bark, affords phenomena among the wonders of nature. Both the milk and bark contain the elements of nutritious and wholesome food for man; and bread formed of its bark would be almost equal to that made from the finest of wheat flour, for the immediate or proximate parts of wheat in flour are found in the bark of the cow-tree.

Recipes.

It is very much to be regretted that more vegetables do not become the food of the farmer. In a climate and soil that grows them better than almost any in the world, they should largely enter into our food supply; and there are so many ways of preparing them, both cold and hot, that all farmer's daughters and wives should study to serve them in various ways. In very warm weather they will not keep sweet boiled over night; but they are no more trouble to prepare than meat, and not half so much as the ruinous pie and cake. I will give some recipes for serving them cold for tea, or you can prepare them early in the forenoon, and serve them cold for dinner, as they are often served at very fashionable tables for lunch or dinner:—

Cauliflower Salad.—Boil a cauliflower in salted water until tender; when cold cut into sprigs, and arrange prettily on a dish; melt three tablespoonfuls of butter and one of vinegar, with pepper and salt to taste. Mustard may be added, if preferred. Before serving, pour over the cauliflower, and arrange a few sprigs of parsley over the top.

Tomato Salad.—Peel some good-sized tomatoes by dipping in hot water; set to cool; slice thin; sprinkle salt and pepper over. Before serving, cover with a plate, and drain off all the water that has run from them. Pour the butter and vinegar over as before.

Green Beans Salad.—Boil tender beans, drain and cool; then arrange neatly on a dish, or in a vegetable dish; mix one heaping teaspoonful of mustard with two of melted butter, and half a teacup of vinegar. Pour over and serve.

Green Peas Salad.—Boil one quart of tender peas; drain and cool; when wanted to serve, pour over four tablespoons of melted butter and a little salt and pepper. Garnish with sprigs of mint.

Cucumber Salad.—Pare and slice thin just before using four well-grown cucumbers, rejecting the ends for about an inch deep, as they are hard and unwholesome. Mix one teaspoonful of mustard with three tablespoons of melted butter. Pour over after arranging lightly in a salad dish. This is an improvement upon the usual vinegar and salt that they are floated in.

Macaroni and Cheese.—Wash and break in small pieces half a pound of macaroni; boil until tender in plenty of water; drain; grate a quarter of a pound of cheese. Any hard cheese will do. Mix with the macaroni and a small piece of butter and a saltspoon of salt. Put all into a pudding dish, and cover with sweet milk. Bake half an hour in a hot oven.

Cabbage Salad.—Cut in four a solid white cabbage; boil until quite tender; drain, and slightly cut it in the dish in which it is to be served when required. Mix one teaspoonful of mustard with three of melted butter and a little vinegar. Pour over the top, and garnish with parsley. This is good hot.

Carrot Salad.—Boil till tender two good-sized carrots; peel off all the tough skin; slice thin, and pour over three tablespoons of melted butter. Garnish with parsley.

Windsor beans, asparagus, lettuce, or any other vegetable are equally good prepared in this way, if they cannot conveniently be served hot.

A Day in July.

Let us throw care to the winds and betake ourselves to the woods, and enjoy all their beauties this sunny afternoon. The cool breeze, though barely enough to ruffle the surface of the shallow stream, the warm atmosphere, the fragrance of flowers, the luxurious growth of weeds and ferns, the smell of fresh earth, and the soft hazy blue of the sky, wield a strange influence over us, and make us ask why such feelings possess us when brought in closer contact with

the beauties of nature. Something holier and better is aroused within us which we cannot define; but it rests, refreshes and strengthens us. Each fern we gather is a little world of wonder under a microscope, and the bloom on the weeds is well worth pausing to admire. The moss covered log on which we are resting contains a long lecture in botany in the fungi which covers it, for every variety in color and shape grows there—from the dear-old-fashioned toad-stool, which delighted our childhood's fancies, to the tiny lichen in every color and shade, from bright green and grey to scarlet and black. One feels tempted to gather some to add to our basket of mosses, but they will not bear detachment from their native soil. The cows seem to enjoy to the fullest the spot they have taken possession of, and look the picture of quiet contentment. Old white

Bess is taking a long draught of the sweet water, while Rose looks on in quiet wonder. Hark! to the song of robin-redbreast, low and sweet and full of quiet joy; doubtless his mate is near on her nest. Our old pet the cat-bird perches himself on a branch very close to our ear, and gives utterance to his discordant cat-call; but he can sing very sweetly to his mate when he feels in the mood. Glancing swallows skim the surface of the stream in search of insects. The air seems alive with their hum, and as we listen, the hoarse "caw" of a crow breaks the silence. The lengthening

shadows warn us that sunset approaches, and we turn with reluctance from the quiet spot where we have spent such restful happy hours.

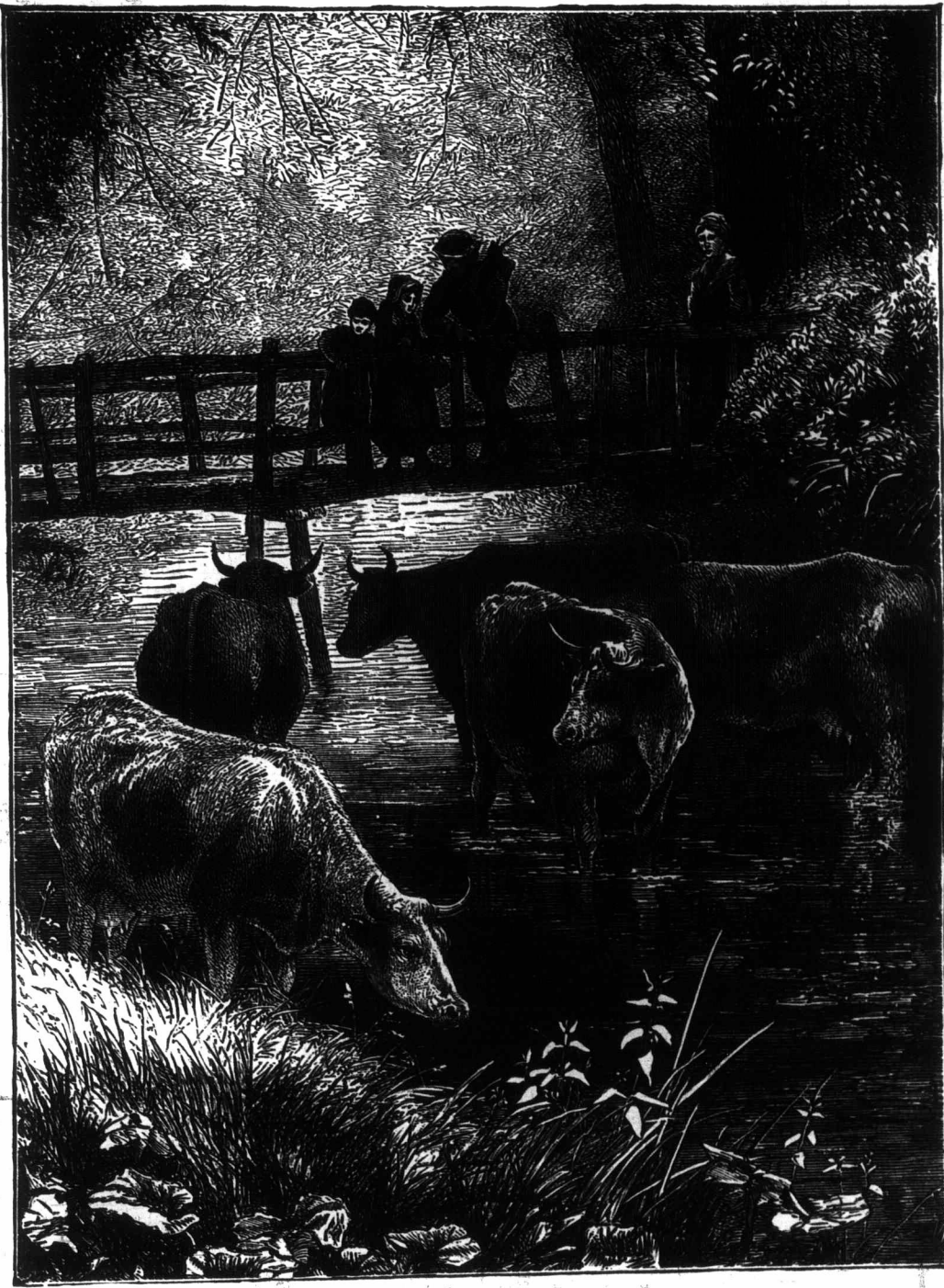
Want of Sleep.

Are you afflicted with insomnia? Perhaps you have too much time for sleep. Perhaps you depend too much on sleep for rest and recuperation. For sleep is not the sole rest of used-up nerves. Sociability, congeniality, and the enjoyment of good company rest the body quite as much as sleep.

punctuality are often surprised after breaking their own cast-iron rules, and passing two or three later hours of mirth and jollity past their usual bed time, to find themselves even more refreshed in the morning than usual. The relaxation of sociability has rested them more than would sleep or an attempt to sleep. But these are conditions not so easily reached in the average family.

In fashionable life we have a formal, exhausting and mechanical evening of more or less dis-

sipation. On the other hand, the evenings of great numbers of families are monotonous humdrum. They involve the assemblage of the same people, the same surroundings, the same paterfamilias yawning over his paper, and the same querulous mamma overlaid with family cares. Fresh people with fresh thought, fresh atmosphere, anything to stir up and agitate the pool of domestic stagnation, are sadly needed and sadly scarce. There needs to be also a constant succession of such fresh people to bring about these results. The world is full of men and women, and in a better regulated life it would be the business after the day's work was done to entertain each other, and give each other fresh life. As it is now, hundreds if not thousands of our households are little better than cells for the incarceration of each family. Thousands are thus worn out



A MIDSUMMER SCENE.

The dreary monotony of life in many a household, involving this tumbling into bed with the mechanical regularity of a machine at nine or ten o'clock in the evening, does not always rest weary bodies. "Early to bed and early to rise" does not always make a man healthy, wealthy or wise. Numbers of organizations are only capable of five or six hours' sleep at a time, and their early lying down to rest is often succeeded by an early waking up and a consequent restless tossing for hours preceding daybreak. The practisers of

prematurely from the utter lack of domestic recreation. There might be written over the graves of hundreds of thousands, "Bored to death by the stagnation of domestic life."—[The Christian at Work.

Our actions must clothe us with an immortality either loathsome or glorious.

When viewed through a microscope the nettle appears the model of an extensive estate, decorated with timber and shrubbery and subdivided by the rays or ribs which proceed from the main stalk into several compartments.

Old Newspapers.

Don't throw them away or burn them to get rid of them. We all know how they accumulate on the library table, and how they are always slipping off the neat piles in which we arrange them, till we are tempted to stuff them into the stove as soon as they are read; but we do not do that any more at our house, for we have found better ways to dispose of them. In the first place, we keep one drawer in the bookcase just for old papers, which we usually collect and put into it every other day, thus keeping the papers ready for use and the table in good order.

Every Friday morning the girl comes for her weekly supply. She wants papers to cover the stand of flowers in the bay window when she sweeps. She pins the big sheets over the flower stand, and thus keeps the fresh green leaves of the plants free from dust. She fastens up the curtains and portieres, and pins newspapers around them. If you have not tried this method, you do not know how much longer hangings so protected from the dust will keep fresh and clean. Finally, she dampens several papers and lays them on the carpet, and as she sweeps, the dust settles on the papers instead of flying all over the room; thus the sweeping and dusting are made much easier and more effectual.

Next, papers are in requisition for cleaning windows, or rather for whipping them after they are washed. Windows and mirrors so dried are much cleaner and brighter than when only cloth is used, and lamp chimneys can be beautifully polished by the same means.

On Saturday, "Aunt Susan," the cook, comes puffing up stairs for "de papers fo' de shelbs, please, miss," and she puts clean papers on all the shelves in kitchen closets and pantries. Aunt Susan has great faith in the merits of newspapers, and always wants a pile of them handy for cleaning her kitchen range.

"Soon's I'se done fryin', I jest scrabbles up one dese yer' ol' papers, an' rubs two, free times 'cross de stove, an' it takes ev'ry bit de grease off quicker'n a streak er lightnin'," she says.

The other day she came in after a shower with her shoes soaked with rain. She took them off, stuffed them full of old papers, and set them in a corner to dry. The next day she held them up triumphantly declaring that they were "jes' as soft an' easy's if dey'd neber seen a drap o' rain. Neber did see nuff'n like ol' papers to keep folks warm, too," she went on; "my ol' man use ter dribe a mule team in wah times, an' when 't were stingin' col' he'd put two, free ol' papers 'cross he shoulders, an' two, free mo' over he bress' an' button he ol' sojer coat ober 'em, an' he says he neber feel a bit er col'. I sabe all de ol' papers, you better b'lebe I does, if I cahn't read 'em as you all does," she added as she trotted off to beat up some crumpets for breakfast.

When spring cleaning-time arrives, old papers are called for to put under the carpet. Several layers of them make a good carpet lining, and if a thicker padding is desired, straw can be used between two layers of papers. This makes a nice elastic lining and a very inexpensive one, which can be renewed every season. Cut in long narrow strips, old paper makes good stuffing for chair cushions and pillows. It may not be equal to down, but it is quite as good as inferior hair for this use.

Several thicknesses of paper placed between

cotton batting makes a warm, light, bed comfortable; and iron holder and kettle holders are made in the same way,—the paper being laid between cotton and the whole covered with calico.

On very cold winter nights we put a newspaper coverlet over our houseplants and never have known them, when so protected, to be pinched by Jack Frost's icy fingers.

It was an old nurse who found out how to replenish, noiselessly, a coal fire in the sick-room. She had the coal brought to the room in a strong newspaper with the corners gathered up and tied. When fresh fuel was needed she could place the paper, just as it was, on the fire with scarcely a rustle. If she could only invent some noiseless method of poking the fire with a newspaper, her name would be held in honor in our household, at least, forevermore. MARION THORNE.

Mushrooms.

Very few people, comparatively, make use of the mushroom as an article of diet. This is due, no doubt, to the fact that death has often resulted from eating the poisonous fungus, commonly called the toadstool, which so closely resembles it. There are, however, certain marks which clearly distinguish the two kinds, and anyone who is familiar with them need run no risk of being deceived. It is a pity to deprive one's table of so great a delicacy, when it is known how easily they are grown, in what a variety of ways they may be served, and how universally they are liked. Being very rich in nitrogen, they are also among the most nutritious vegetables. They also prove a source of large profit to gardeners, the usual price in cities being a dollar and a-quarter a pound.

The edible mushrooms are most plentiful in the months of June and September; though they may be found all through the summer, if warm, moist weather prevails. Examine the under part or "gills" of the mushroom; if it is of a delicate pink or flesh color, it is good for food; if yellow, white or black, it is poisonous. The skin of the edible mushroom will readily peel off like the skin of an orange; that of the poisonous fungus will not, and it has also a disagreeable smell, while the edible variety has a pleasant odor. Another test is to sprinkle a little salt on the gills; if it turns yellow, they are poisonous; if it turns black, they are good. While cooking them, stir with a silver spoon, and if they are poisonous the spoon will turn black; if the spoon retains its brightness they are good. The seed or "spawn" is sold by all seed houses, and comes in one pound bricks, at thirty cents per pound by mail. Directions for growing accompany each package. When you have once learned how delicious they are, you will not willingly be without them again. They may be dried, and when properly cooked will be found as nice as when fresh. BAY BAKER.

A new kind of decorative border for a scarf can be made as follows, and is exceedingly brilliant in effect: Make a border of crazy patchwork, or imitate the arrangement of stained glass mosaic work, outlining every piece of silk with gold thread. Figures in the silk are then adorned with gold thread and spangles, tiny spangles and larger ones producing a gay sheen of light. These borders are applied to creamy cotton, linen, or silk scarfs.

Give the boys a chance to earn a few dollars by disposing of the surplus garden truck, and see if they do not show energy enough.

Uncle Tom's Department.**Never be Idle.**

Never be idle, find something to do;
Water grows stagnant when still.
Tools, if neglected, will rust, so will you;
Work while you can, with a will,
With patience and zest, and hopes for the best,
Whate'er the position you fill;
Men who were poor have pushed to the fore,
And tolled to the top of the hill.
What they have done you may do if you try;
What they have won you may win by-and-by.
Man is a wonderful self-acting machine,
Made with unmatchable skill;
Sloth clogs and injures him, work keeps him clean,
And potent for good or for ill,
Man needs no oil other than toil.
Labour-oiled works do not creak,
Action ne'er clogs cranks, pistons or logs;
Labour gives strength, sloth makes weak.
Be this your plan; to persistently try,
To work when you can, and to rest when you die.

MY DEAR NIECES AND NEPHEWS:—So, vacation is here, and these warm July days make the most studious of my boys and girls ready to leave the school-room for a time, and gain up muscle for another year of study. I suppose you did, or felt like doing, what the words of an old college song says:—

"One cheerful chorus, ringing loud,
We'll give before we go,
For school, for friends and holidays,
And Alma Mater O."

And now, how best to use them, is the question. I said my letter was especially for my elder nieces this month. The boys may read it, of course. It will be their turn next time. But knowing how busy they are just now with weeding, haying and harvesting these long days and long hours of work, and few of darkness, I thought they might get too much to think of all at once. My great interest in them will find vent in a letter before they return to school again, however.

So, girls, but I hear some of you say, does Uncle Tom think *we're not busy*? O yes; I know you are. Like Ellen Douglas, "the sun has tinged your cheek with brown," and your fingers are fruit-stained, for have you not been in the garden picking those large, beautiful berries, carrying away from those currant bushes the clusters so full and ripe and red—not unlike your own lips—those cherries, too, and yet more difficult picking gooseberries, so well guarded by thorns. Yet we like the gooseberries; and when done, how sweet the satisfaction! When, after the cleaning and the preserving, you count your self-sealers, and view your stores, you almost forget the trouble it cost you, and think in pleasant anticipation of the enjoyment of these as you gather round the table in the months to come at that sweetest hour—meal-time—when families meet and hold sweet intercourse, and enhance your congenial tastes; and in these same preserves, how many thoughts, we wonder, are canned up with them? For *think*, you did, I know, as you picked the fruit, as you prepared it, as you watched it; yes, on even to the filling of the cans.

"Thoughts on thoughts, a countless throng,
Went chasing countless thoughts along."

And these thoughts, what are they? Tell me what they are, and it is no difficult matter to tell you what you will yet be, for "as we think, so are we." Long before an action—bad or good—is done, thought was at work, and prompted it. In a certain piece of fancy work, you begin at the centre and work outward, all branching from and being guided by that beginning. Thought is your centre-piece; on it

you depend for your life plan. Take care what and how you think. As the thorns and scratches in the garden recalled your thoughts for a moment, so let the discouragements and trials not weigh too heavily when they come. And do not, please, dear girls, waste your precious time in envying some more highly favored daughter of Eve. Uncle Tom's eyes are not like Eli's yet, and he has noticed that girls who have grown up through difficulties—clearing their own path as it were—are those who have done most towards making the world better than they found it. Like the oak, which the winds blow against, and the rains beat, and the storms try all over, and only serve to strengthen it and root it more firmly in the earth, so let your principles of truth, of nobility, and of honor, be established and rooted, that the daily rubbing with the world will become your servant to build you up in true girlhood, which will make true womanhood; one whom the world recognizes as a help, not a hindrance; one to whom the worldling comes in his hour of trial or weakness, knowing there is strength and true sympathy in developed character. In studying botany we have been much interested in the life of parasites—those lichens which grow and live on the life of another, and draw to themselves its life juices.

Girls, don't be parasites. Be independent. Dare to stand firm. Do be somebody. Reared in wealthy homes, spoiled by over-indulgent parents, girls grow to be like hot-house plants; but taught to do your work, to fill your part, trusting only in Him who is Strength, you need not fear.

Your favorite poet, Longfellow, has written you a poem for yourselves, girls. It is "Maidenhood." One verse is:—

"Standing with reluctant feet,
Where the brook and river meet,
Womanhood and childhood feet."

I have you in mind, with your cheeks of peachy bloom, bright eyes, inquiring faces, ringing step, and light laughter. I can imagine you the "sweet girl graduates" in the years to come, with student's gown and cap. It is in love I give you my closing advice. Let everything that is wrong, or base, or low, be put away. Think only noble thoughts. Strive for a high ideal. Lose no golden moments. Make yourself a rounded-out woman.

Now, girls, with your neat gloves, your pretty dresses, your stylish hats, your white handkerchiefs, your swaying fans, your scented bouquets, I must leave you, so bid good-bye.

Your loving UNCLE TOM.

TO TAN AND COLOUR SHEEPSKINS WITH THE WOOL ON.—Tan in alum dissolved in water. Proportion: One pound of alum to one gallon of water. Wash the wool clean with plain soap. To colour, use aniline of any shade you desire. Dissolve one pound of aniline in two gallons of water; strain before using; then float skin in a dye box, wool down. See that they lie flat, and let remain till colour or shade you desire comes; then take out and run through clear cold water, and hang up in a hot room to dry. For plain white, wash the skins well, after tanning as described above. If not white enough, hang up in a small room, and bleach with powdered sulphur set in a pan in centre of room burning. Be careful to have no escape of the sulphur fumes, and have the room air-tight.

Large Things.

The largest university is Oxford, in England. It consists of 21 colleges and five halls.

The largest park in the United States is Fairmount, at Philadelphia, and contains 2,740 acres.

The largest circulation of paper money is that of the United States, being 700,000,000, while Russia has 670,000,000.

The largest tree in the world, as yet discovered, is in Tulare County, California. It is 275 feet high and 106 feet in circumference at its base.

The largest desert is Sahara, in Northern Africa. Its length is 3,000 miles, and breadth 900 miles; having an area of 2,000,000 square miles.

The largest volcano in the world is the Etna. Its base is 90 miles in circumference; its cone 11,000 feet high. Its first eruption occurred 474 B. C.

The largest ship in the world is the Great Eastern. She is 695 feet long, 83 feet broad and 60 feet deep, being 22,927 tons. She was launched January 1, 1857.

The largest body of fresh water on the globe is Lake Superior; 400 miles long and 160 miles wide. Its greatest depth is 200 fathoms. Its surface is 635 feet above the level of the sea.

The largest stationary engine in the world is at the zinc mines at Friedenville, Pa. The number of gallons of water raised every minute is 17,500. The driving wheels are 35 feet in diameter and weigh 40 tons each. The cylinder is 110 inches in diameter.

—[Woman's Magazine.]

Little Johnny Visiting.

Mrs. Bright—Ah, Mrs. Cheery, I'm delighted to see you! and you've brought your little Johnnie to see me! How do you do sir? I'm glad to see you, my little man!

Mrs. Cheery—Shake hands with the lady, Johnnie, (Johnnie won't, and doesn't). He begged so to go out with me this afternoon, and I said he might if he'd be a very, very good little boy and—Johnnie, let that vase alone—and he said that he would, so I—Johnnie don't take that book off the table. I think it a good plan to take children out once in—Johnnie, stop turning the leaves of that book so fast. Lovely day, isn't it? I'm so glad that—Johnnie stop pulling the fringe off that chair—I'm so glad Winter is over, for I'm so tired of—Johnnie, will you let that piano alone? If you're not a good boy mamma will—as I was saying, it's so delightful to have a few sunny days after—Johnnie, let that album alone. Mamma don't want to speak to you every minute. After all, the Winter has seemed very short for—Johnnie, you mustn't go upstairs—come here. Now, sit right down here by mamma. Did you see Rosina Vokes? We went, and I—Johnnie if mamma has to speak to you again about banging away on that piano, she'll take you right home! Yes, I thought Rosina lovely in the dance and as a—Johnnie, you'll break that cup and saucer if you're careful. What a beautiful cup it is, Mrs. Bright, real Dresden, isn't it? I'm so fond of—there, Johnny, I told you you'd upset that table if you weren't careful. I'm so sorry, Mrs. Bright, and the cup is broken! Dear, Dear! Johnnie, you come right home with me and you shall never, never go out with me again. (But he does the next day.)—[Times.]

What to Avoid.

- Do not manifest impatience.
- Do not engage in argument.
- Do not interrupt another while speaking.
- Do not find fault, though you may gently criticize.
- Do not talk of your private, personal or family matters.
- Do not appear to notice inaccuracies of speech in others.
- Do not allow yourself to lose temper or to speak excitedly.
- Do not allude to unfortunate peculiarities of anyone present.
- Do not always commence a conversation by allusion to the weather.

Popping the Question.

It was seven long years since Jonas Harris had begun to "keep company" with Miss Hannah Bell, and yet, in all that time, he had not mustered courage to propose a certain important question. His house was lonely and waiting; hers was lonely enough to be vacated, and still Jonas could not bring himself to speak the decisive words. Many a time he had walked up to her door with the courage of a lion, only to find himself a very mouse when she appeared.

He had never failed in dropping in to cheer her loneliness on Christmas evening, and this year he presented himself as usual. The hearth was swept, the fire burned brightly, and Miss Hannah was adorned with smiles and a red bow.

Conversation went serenely on for an hour or so, and then, when they both sat paring red-cheeked apples, with great contentment, Jonas began to call upon his recollections.

"It's a good many years, ain't it, Hannah, since you and I first set here together?"

"Yes, a good many."

"I wonder if I shall be settin' here this time another year?"

"Maybe I shan't be at home. Perhaps I shall go out to spend the evening myself," said Miss Hannah, briskly.

This was a blow, indeed, and Jonas felt it.

"Where?" he gasped.

"Oh I don't know," she returned, beginning to quarter her apple. "I might be out to tea—over to your house, for instance."

"But there wouldn't be anybody over there to get supper for you."

"Maybe I could get it myself."

"So you could! so you could!" cried Jonas, his eyes beginning to sparkle. "But there wouldn't be anybody to cook the pies and cakes beforehand."

"Maybe I could cook 'em."

"At that moment Jonas' plate fell between his knees to the hearth and broke in two, but neither of them noticed it."

"Hannah," cried he, with the pent-up emphasis of seven long years, "could you bring yourself to think of gettin' married?"

A slow smile curved her lips; surely she had been given abundant time for consideration.

"Maybe I could," she returned, demurely, and Jonas has admired himself to this day for leading up to the subject so cleverly.

A lovely photograph frame can be made easily and quickly by taking a piece of wood (the required size) with the bark on, and cut away the bark just the size of the picture, which, when slipped into the space left by the bark, will, of course, be held into place by the wood at the back. The border of bark should be gilded or bronzed, and a very pleasing effect is the result.

Puzzles.

1-TRANSPOSITION.

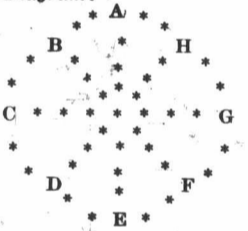
Sirhi apt awsgnokwr yaa w.
Yubs ta pengwesi noe gtrbh ejuu yad.
Apt dasi ish steam "tawh rea ouy butao ?"
Rea ouy gipnesew het lofro fo het omostreor tuo ?"
Apt doelok pu tibw a leaboredm ring
Tath darspe mofr ish otw reas ondw ot ish nich.
"User ruyo ohron" dasi eh, sa eh adengle ta eth
orod
"Mi' snipegew het ritd tuo btu vlegan the rofol."
LIZZIE DRYDEN.

2-CHARADE.

On taking up the ADVOCATE, the farmer's help and
treasure.
I saw two little bits of verse, which pleased me
beyond measure;
The one by my FIRST cousin A., to do much good is
reckoned.
For she wants every girl to arm and try to beat her
SECOND.
The other piece - although we all read it with
admiration -
Was written to make Uncle Tom spurn my June
invitation.
Say, cousin, do you think 'twas FIRST to say my
little sister
Should make him wash the dishes till his hands
began to blister?
Now, if good-natured Uncle Tom goes to see that
"brain-twister,"
Ed's little SECOND will harass him much more than
my sister.
So, good old Uncle Tom, visit me, you've lots of
time to pack still,
We're going to have a FIRST the first of next month
here in Sackville!
I asked you first; of course you'd like on all your
friends to call,
But really I don't think that you'll have time to
visit ALL.
You know I promised, if you'd come, in verse no
more to trouble you;
That promise ought to bring you to your nephew. -
H. A. W.
HARRY A. WOODWORTH.

3-WHEEL.

Diagram: -



Spokes: - A to E -
a curve or bending.
B to F - Discipline.
C to G - Spectacles.
D to H - Removal.

Felloes: - C over
to G - Assurance. C
under to G - Inno-
cence.
FAIR BROTHER.

4-NUMERICAL ENIGMA.

My 1, 2, 3, 4, 5, 6, is found
Throughout all the land.
Of my 1, 2, 3, there is too many
Allowed to live in the country.
The next in order, 4, 5, 6,
A goddess who often got people in mischief.
My 4, 5 and 3, 4, 5, are animals.
And it is well known to all
That 3, 4, 5 delights eating 1, 4, 5.

HENRY REEVE.

5-ILLUSTRATED REBUS.



6-ANAGRAM.

La! A man cannot always tell
What the next day will bring forth;
But he can take whole for what it is worth,
And observe the weather sign as well.

HENRY REEVE.

7-NUMERICAL ENIGMA.

My 8, 19, 26, 22, 27, 4, is to prevent.
My 15, 16, 17, 18, 21, 1, is to lose remembrance of.
My 7, 13, 14, 5, 10, is to rage.
My 9, 12, 11, means one.
My 20, 23, 24, 25, 25, is startling.
My whole is a worthy text.

A. T. REEVE.

8-DROP-VOWEL.

-r h- rts -r- th- g-rd-ns.
-r th-ghts -r- th- r- ts.
-r w-rds -r- th- bl-ss-ns.
-r d-ds -r- th- fr- ts.

JESSIE DRYDEN.

9-DROP VOWEL.

Th- p-th -f s-r- -nd th-t p-th -l-n-
L- -ds t- th- l-nd wh-r- s-r- -s -nkn- -n
N- tr-v-ll-r -v-r r- -ch- d- th- bl-ss-d -b-d.
Wh- f- -nd n-t th-r-rs -nd br--rs -n h-s r--d
-C- -p-r.
A. T. REEVE.

10-CHARADE.

Cousin Harry's went and done it,
Done what? did I hear you say;
Why! built a "CABIN" for Uncle Tom,
COMPLETE to "STOWE" us away.

PRIME! can we find the furniture?
Which our cousin did omit:
By working hard for Uncle Tom,
We will have to finish it.

Will some one please to build the "stairs,"
Because we will want to climb;
If we should visit Uncle Tom,
Which we may all do some time.

A "hat-raek" too, do not forget,
Whereon to hang our head-gear;
When we go to see our Uncle Tom,
We must feel gay (not austere).

A game of ball, perhaps we'll have,
To get things LAST rotation;
We'll choose for umpire Uncle Tom,
He'll decide things "square," I ween.

Now, cousins all, both great and small,
Let things LAST rotation;
We'll have to write to Uncle Tom,
And get his approbation.

FAIR BROTHER.

Answers to July Puzzles.

1- DAM
ONE
ONE
EXAMINATIONS
R M B L V
A O I E
D G O R MANS LAUGHTER
I S L R N G U N D A W V
O L D O G N U S E A I R E
B E N E T W R Y B E
E A G E A P H O G L A D R A
D C N P O A G E A Y R A
I A O O L G E T D R Y A
N I U L G E T D R Y A
T E A C H E S U B S T A N T I A T E
2- D A I R Y
R A Y
D I A M O N D
R O L
O N E
D
3-The long summer days have
come,
And with them plenty of rain,
To cheer the farmer with his
crops,
And give him lots of grain.
4-Forget.

5-Maritime.
6-All our knowledge is ourselves to know.
7-Alone.
8-Use well the moment, what the hour
Brings for thy use is in thy power;
And what thou best canst understand
Is what lies nearest to thy hand.
-Goethe.

9- D
B E
S O N
A L T O
S L A T T
B O T T L E
D E N O T E D
10-Determination.
11-Martin.

12-My dear, bonnie, blue-eyed sister Elizabeth
Ann, and her auburn haired friend, Victoria Isabel
Thomson, gave a picnic. They invited a lot of
female friends and seven fellows. They went
twenty miles to the park, and till the sun went
down they stayed. Victoria's fellow was John
Halifax, gentleman, and was a nice holy man. But
the favorite was Phillip Washington, a clear-headed
negro, who made a deal of fun. They had a grand
supper, for which they all made a big rush. For
the first course they had sheep's head and elk and
green peas. One of the ladies, who was delicate,
ate cod and white shark, and for a side dish a dove,
with Worcester sauce. They all drank black tea
and milk, sweetened with yellow sugar. They all
had a pleasant time, but on returning home got
stuck in the mire, where they all got covered with
mud, which rather spoilt the day's outing. The
result of the picnic was a wedding, with Victoria
for the bride, three weeks later; and there is
prospect of another, so that the event came out all
right.

Names of those who have Sent Cor-
rect Answers to July Puzzles.

Lizzie Dryden, Jessie E. Dryden, Mabel Clazie,
Robert Wilson, Flora Drummond, Mary Drum-
mond, Willie L. Redner, Annie K. Fox, A. L.
Shaver, A. Russell Boss, Morley T. Boss, James
McComb, Ed. A. Fairbrother, A. T. Reeve, Henry
Reeve, Elinor Moore, Edward McKenzie, Willie
Howell, Jessie Morley, George D. Ross.

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 bar-
gains, and they can always find safety in doubtful
cases by paying for goods only upon their delivery.
All Advertisements, to insure insertion, must
be in this office by the twentieth of each month.

Agricultural & Arts Association.

PROVINCIAL EXHIBITION

WILL BE HELD IN THE
CITY OF LONDON
FROM
SEPT. 9TH TO 14TH, 1889.

Entries Will be Closed Aug. 24. Prize lists,
containing blank forms for entries, can be obtained
of the secretaries of all agricultural societies, or by
applying by post card to
283-b HENRY WADE, Secretary, Toronto.

CANADA'S GREAT
INDUSTRIAL
FAIR
AND
AGRICULTURAL EXPOSITION
1889
TORONTO
SEPTEMBER 9th TO 21st.

Increased Prizes, Greater Attractions and Lower
Railway Fares than ever before.
Newest & Best Special Features that money can procure.
Over 250,000 visitors attended this exhibition last
year. Entries close August 17th. For Prize
Lists and Forms drop a post card to
H. J. HILL,
J. J. WITHEROW, Pres. Man. and Sec., Toronto
282-c

THE GREAT
CENTRAL FAIR
WILL BE HELD IN THE
CITY OF HAMILTON

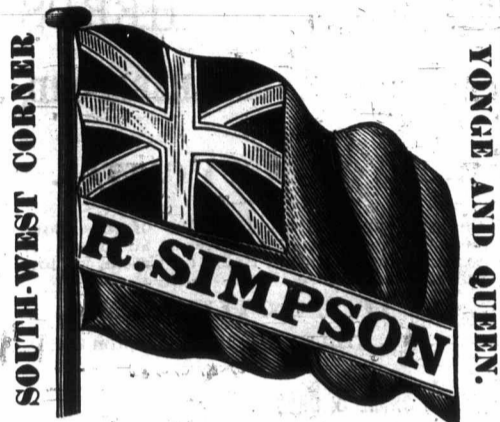
ON
MONDAY, TUESDAY, WEDNESDAY, THURSDAY & FRIDAY
Sept. 23, 24, 25, 26 and 27, 1889.

When prizes will be offered for Stock, Agricultural,
Horticultural and Dairy Products, Poultry, Imple-
ments, Manufactures, Fine Arts, Ladies' Work, etc.
COMPETITION OPEN TO THE WORLD.
In addition to the usual features incidental to a
great fair, attractions of a popular character will be
secured for the entertainment of visitors, a pro-
gramme of which will be issued later. Evening
concerts and illuminations.
F. C. BRUCE, C. R. SMITH,
284-b President. Secretary.

WHEAT.

Rennie's Autumn Catalogue
OF
FALL WHEAT

now ready and will be mailed free to all applicants.
We are offering two new varieties this season. Full
description furnished upon application. Fine
samples of GARFIELD, BONNELL and other
Winter Wheats, also a complete stock of re-cleaned
CLOVER AND GRASS SEEDS
at lowest market prices. Address
WM. RENNIE, Toronto.
284-a



**TREMENDOUS
-SUMMER-
CLOSING-OUT SALE**

Nearly Half a Million Dollars Worth (\$500,000) of Staple and Fancy Dry Goods to be cleared before the 1st of October.

Every department in the house has been thoroughly overhauled and sweeping reductions made in our already low prices. Our buyers are now in Europe scouring the European markets, and carrying out our great system of paying cash for all purchases, and thereby getting the lowest quotations and the best discounts obtainable. There is no bargain, however great, or fabric, however scarce, that is not within our reach or readily put in our way. To make room for our fall purchases a Great Summer Closing-Out Sale is now being held, and we are determined to make a grand clearing at any cost, and if our loss is great, greater then will be our customers' gain. Visitors to the city during exhibition week should give us a call.

R. SIMPSON

South-West Corner Yonge and Queen,
TORONTO, ONTARIO.
280-b

BOYS FOR FARM HELP!

The managers of DR. BARNARDO'S HOMES desire to obtain good situations with farmers throughout the country for the boys they are sending out from time to time from their London Homes. There are at present nearly 8,000 children in these Homes, receiving an industrial training and education to fit them for positions of usefulness in life; and those who are sent to Canada will be selected with the utmost care, with a view to their moral and physical suitability for Canadian farm life. Farmers requiring such help are invited to apply to

MR. ALFRED B OWEN,
AGENT, DR. BARNARDO'S HOMES,
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279-y



DRS. ANDERSON & BATES, Surgeons of the Eye, Ear, Throat and Nose, 84 North James St., Hamilton, and 17 Grange Road, Toronto. Sole agents for Prof. North's Earphone for the incurable deaf. 284-y

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Sure death to ticks, vermin on cattle, horses and poultry. A powder easily applied and perfectly harmless. Wm. Linton, Stock-breeder, Aurora, says of it: "The best article in the market." Endorsed by the leading farmers.

G. D. PATTERSON, Chemist Aurora.
Trial package sent by mail. Price, 50c. 280-y

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SEED WHEAT. SURPRISE WHEAT!

After six years test has proved the best hardiest variety of White Wheat yet introduced; excellent yielder; splendid milling qualities; bald, with very stiff straw; large, plump heads; clean, pure seed. Moderate price.—**THOS. ELMES,** Grain Exporter, Princeton, Ont. 284-a

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Not to Crack, Split, Puff, Break OR PART BETWEEN THE FLIES.

Send for descriptive circulars and prices.

THE WATEROUS ENGINE WORKS CO., LTD.,
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Threshing Machines.

THE NEW MODEL

As built at Canton, Ohio, and by

Joseph Hall Machine Works.

THE BEST—BETTER THAN EVER NOW.

The Cleanest Thresher in America. Moderate in Price. Superior in Workmanship.

Buyers, consider what you save in price, in what you save in grain, and in the cleanness of the grain threshed. Insist upon getting **THE NEW MODEL.** Take no other. Write to

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284-b Toronto.

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SUMMER COOKING.

Will Roast or Steam or Roast and Steam at the Same Time.

A whole dinner of three courses is put on at the same time. Left absolutely alone for 24 hours, when everything will be well done—nothing overdone.

COST OF FUEL FOR DINNER ONE-HALF CENT.

No odor of food or oil. The heat used is the **WANZER LAMP** only. Agents wanted.

R. M. WANZER & CO. MANUFACTURERS,

HAMILTON, ONTARIO.
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\$1,500.00 WORTH OF STOCK, IMPLEMENTS, ETC GIVEN AWAY!

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CONDITIONS:

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

STOCK.

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

IMPLEMENTS, ETC.

- For 110 new names a Bain Farm Truck, value \$75, manufactured by Bain Wagon Co., Woodstock, Ont.
- For 65 new names a Patent Iron Frame Section Spring Tooth Cultivator, value \$38, manufactured by J. O. Wisner & Son, Brantford.
- For 110 new names we will give a first class wagon, value \$75, manufactured by the Chatham Manufacturing Co., Chatham, Ont.
- For 75 new names we will give one of the celebrated Westward Ho Sulky Plows, value \$40, manufactured by Copp Bros., Hamilton, Ont.
- For 125 new names we will give one of Halliday's Standard Wind Mills, value \$75, manufactured by the Ontario Pump Co., Toronto, Ont.
- For 140 new names we will give a Hay Loader, value \$75, manufactured by Matthew Wilson & Co., Hamilton, Ont.
- For 100 new names we will give a large Straw Cutter with Carriers attached, value \$55, manufactured by B. Bell & Son, St. George, Ont.
- For 40 new names we will give a large Agricultural Furnace, value \$22, made by the Gowdy Manufacturing Co., Guelph.
- For 65 new names we will give a new Fanning Mill, value \$35, manufactured by Manson Campbell, Chatham, Ont.
- For 90 new names we will give one of Osborne & Co.'s large Stock Scales, value \$50, capacity 4,000 lbs., manufactured by Osborne & Co., Hamilton, Ont.
- For 40 new names we will give a Winchester Repeating Rifle or a Breech-loading English Shot Gun of latest design and good quality, or 10 new names we will send an imported Breech-loading German Rifle.
- For 40 new names we will give the Model Harness, valued at \$20, manufactured by the Farmers' Supply Co., 176 King St. East, Toronto. All stock or goods shipped free on board the cars.

STOCK FOR SALE.
H. GEORGE & SONS,
 CRAMPTON, ONTARIO,
 Importers and Breeders of
OHIO IMPROVED CHESTER WHITE SWINE,
 also Berkshire and Suffolk Swine. Orders booked for spring pigs in pairs, and trios not akin. All breeding stock recorded. Correspondence solicited.
 280-f

IMPORTED
Berkshires and Cotswolds.

Our new importation of about 35 Berkshire pigs and 25 Cotswold sheep is expected to arrive about the end of July. This lot includes a fine lot of young boars and sows and some good young rams, selected by Mr. J. C. Snell from the best of flocks and herds in Great Britain, which will be offered for sale.

JOHN SNELLS' SONS,
 284-a
 EDMONTON, ONT.

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Importer and Breeder of
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My herd consists of 12 choice registered sows, bred to Middlesex 3717 (Free Trade 4359) (Crown Prince 4563), Uncle Sam 4361, National C. W. Record. Expect some good ones for fall trade. 282-y.

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—OF—
SHORTHORN CATTLE.

Animals of both sexes for sale.

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 SYLVAN, ONT.



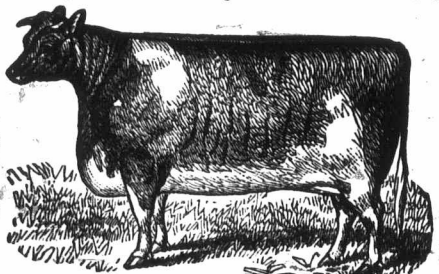
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SHROPSHIRE SHEEP
 IN JULY.

Show Ewes, Rams and Lambs

Offered at reasonable rates; also a limited number of store ewes of the choicest breeding. First come, first served. Call or address

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

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

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

Claremont Station, C. P. R., or Pickering Station, G. T. R. Parties met at either station on shortest notice. Come and see them. 265-1f

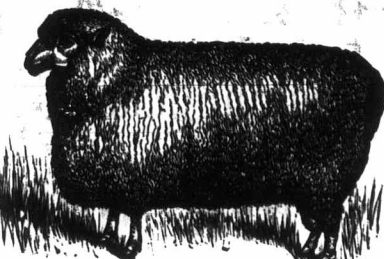
BOW PARK HERD

—OF—
PURE-BRED SHORTHORNS.

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

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

COTSWOLDS AND SHORTHORNS FOR SALE



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

JOSEPH WARD,
 279-y
 MARSH HILL, ONTARIO.

Prize Winning Ayrshires for Sale.



Mine is one of the largest and most successful show herds in Canada. They are finely bred and of great individual merit. Bulls, heifers and cows always on hand for sale; also a few good Leicester sheep. Correspondence solicited. Visitors welcome. Address:

THOS. GUY,
 279-y
 Sydenham Farm, Oshawa, Ont.

BERKSHIRES

—AND—
COTSWOLDS.

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

Brampton and Edmonton Railroad Stations.

For forty years we have led all others in these lines, both in the show yards and breeding pens.

We now have a choice lot of young pigs varying in age, from six weeks to six months, all are descended from fashionably bred prize winning English stock. We also have a grand lot of Cotswolds; a large number of which are yearlings. Good stock always for sale. Visitors welcome. Write for particulars. 279-y

SHORTHORNS

—AND—
COTSWOLDS

FOR SALE.

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

JAMES GRAHAM,
 279-y
 PORT PERRY, ONT.

HILLHURST HERDS

ABERDEEN, ANGUS, HEREFORD,

—AND—
A. J. C. C. JERSEY CATTLE.

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

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FRANK R. SHORE & BROS.

White Oak, Ont.

Breeders of

SCOTCH SHORTHORNS

—AND—

SHROPSHIRE.



Young bulls and heifers for sale from imported Cruickshank sires and from dams of the most approved Scotch breeding. 273-y

D. ALEXANDER,

Brigden, Lambton Co., Ontario.



My Shorthorn herd now consists chiefly of Imp. Lady Violet Lustre and seven of her daughters, and two daughters of Imp. Beauty 15th, almost all sired by one bull, and of one character, thick, and fine quality. Can furnish a splendid young herd, including an imported bull. Trains twice daily. Station one mile. 282-y

JOHN MILLER & SONS,

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Extensive breeders and importers of **Clydesdales, Shorthorns and Shropshires.** Business established in 1848. We always have on hand and for sale a large number of imported, and home-bred animals. A visit, or correspondence solicited. 282-y

St. Anne's Herd Jerseys

The Largest and Oldest Pure St. Lambert Herd in the World.

75 HEAD OF THE WORLD-RENOUN
VICTOR HUGO & STOKE POGIS
 (VICTOR HUGO STRAIN.)

HOME OF THE CHAMPION MILCH COWS
 Jolie of St. Lambert 5126, and Jolie of St. Lambert 3rd, Winners of the Silver Medals and Diploma Sweep-stake Prizes at Toronto, 1885; Quebec, 1887, and Kingston, 1888, scoring the highest number of points (113.28) ever made by any breed in a public test.

Victor Hugo 197
 Has now seventy descendants that have tested 14 to 36 lbs. of butter in seven days. His best daughter, Lady Fawn of St. Anne's, with her wonderful record of 16 lbs., 12 1/2 ozs. of butter in seven days; 64 lbs., 8 ozs. in twenty-eight days, and 40 lbs. milk per day. All, when fifteen years old, is in this herd.

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 Do you want a pure St. Lambert Bull to head your herd—bulls having from 21 1/2 to 31 1/4 per cent. Victor and 18 1/4 to 37 1/2 per cent. Stoke Pogis 3rd, combined with as high as 90 per cent. of Mary Anne of St. Lambert's blood? For sale from \$100 to \$250. We don't keep bulls to sell for less than \$100, nor will it pay you to buy a poor one. A bull is half the herd; therefore, buy a good one.

W. A. REBURN,
 282-c
 St. Anne de Bellevue, P. Q., Can

HIGHLY BRED JERSEY COWS AND HEIFERS,
Registered in the A. J. C. C. Most of the stock is St. Lambert blood, sired by Canada's John Bull, No. 8388, and due to calve in August and September. Also a four-year-old bull sired by Canada's John Bull: very handsome; sold to prevent in-breeding, and a six months' old bull calf, sired by above and from an imported cow.
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SHARMAN & SHARMAN

Souris (Plum Creek),
Manitoba,
Breeder & Importers of
Shorthorn Cattle,
Southdown Sheep
and Berkshire Hogs.
Send for prices 284-y



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Rosedale Stock Farm
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BREEDER AND IMPORTER OF
CLYDESDALES AND SHORTHORNS.
Young animals, males and females, imported and Canadian bred, always on hand for sale. Visitors welcome. Satisfaction guaranteed as to price and quality.
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Cavanville Station on the C. P. R. 78-y

D. & O. SORBY, GUELPH, ONT.,
Breeder and Importers of
FASHIONABLY BRED CLYDESDALES

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

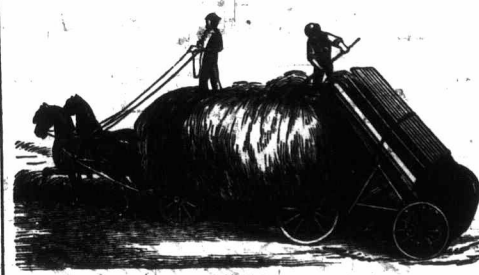
COLDSTREAM STOCK FARM,
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We have on hand and for sale a superior lot of imported and home bred Clydesdale Stallions and mares. Several of them were prize winners at the leading shows in Scotland and Canada. Also a few choice Shetlands. Prices to suit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



M. WILSON & CO.,
Hamilton, Ont.,
Manufacturers of all kinds of

HAY TOOLS



Foust's Patent Hay Loader, Anderson's Patent Rake Attachment, Grand Rapids Hay Tedder, Wisconsin Dead Lock Hay Carrier and Fork.
The above mentioned implements are the most popular Haying Tools in the market. Send for descriptions and prices. Good, responsible agents wanted.

"RIVERSIDE," Woodburn, Oct. 28th, 1888
MESSRS. M. WILSON & CO., Hamilton.

Dear Sirs:—We used your Hay Loader during the entire season while haying lasted, and were well pleased with it—so much so that the work hands were unwilling to draw in hay without using it, even in limited quantities. There is no surer it, even in limited quantities, does its work well than to find the work hands anxious to use it. We consider it a great saving in time and work when hay is loaded in this way. By cutting but a limited portion at once, and using the Tedder and Hay Loader judiciously, hay can be fairly well saved almost any season. We would not think of doing without either of those implements in future.
Yours, etc.,
THOMAS SHAW, 280-g
Prof. of Agriculture, Agricultural College, Guelph.

THRRESHING MACHINES & HORSE-POWERS
(ONE, TWO AND THREE HORSE)



Guaranteed to be "the best" Tread Horse-power Threshing Machines made, and takes the lead wherever introduced. Agents wanted.
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TIPPER, BURDITT & CO., Agents, St. John, N. B.:
E. G. PRIOR, Agent, Victoria, B. C. 281-f

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TORONTO, . . . ONTARIO. 279-y

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- D**R. CHAS. S. MOORE & DR. F. P. DRAKE, N. E. corner Wellington & King Sts., London, Ont.
- M**EREDITH, FISHER & BEATTIE, London, Ont. Barristers, Solicitors, &c.
- G**RAYDON & McCANN, 78 1/2 Dundas St., London, Ont., Barristers, Solicitors, &c. Money to lend.
- E**. ADAMS & CO., London, Ont., Wholesale Grocers.
- R**ID BROS. & CO., 387 to 395 Clarence St., Paper.
- S**TERLING BROS., Wholesale Boots and Shoes. Granite Block, York-st., opp. G. T. H. Station
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- W**ILSON BROS., Grocers and Wine Merchants, 398 Richmond street, London, Ont. 288-y
- N**EW YORK STORE, London, for the last 25 years has been known as the reliable house for
- A**. D. CAMERON & SON, Burwell St., Coal, Wood, Lime, etc., London, Ont.
- E**. BELTZ, Dundas St., London, Ont., Hatter and Furrier.
- T**HOS. GREEN & CO., Cor. Clarence & Bathurst Sts., London, Ont., Builders and Contractors, Planing Mill, Sash & Door Factory.
- C**HAS. CHAPMAN, London, Ont., Book Binding in all its branches; dealer in Artists' Materials.
- F**RANK COOPER, ARTISTIC PHOTOGRAPHER, over 109, 171 & 173 Dundas St., London, Ont
- E**. BURKE, 521 Richmond St., London, Ont., dealer in Photographic Goods, Amateur Outfits, &c.
- F**ARMERS—W. D. Buckle, Land & Loan Agent, Albion Block, Richmond St., London, sells the cheapest and best City Property.
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- P**ETHICK & McDONALD, 206 Richmond St., Merchant Tailors and Importers of French, English, Irish & Scotch Cloths, Tweeds & Gents' Furnishings
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- W**INLOW BROS., 118 Dundas St., London, Ont., dealers in Boots, Shoes and Rubbers.
- H**ODGENS BROS., London, Ont., American House Livery.
- J**AMES REID & CO., Cheapest and Best Stock of Hardware. No. 118 Dundas St., north side.
- J**OHAN T. STEPHENSON, Furniture Dealer and Undertaker, London, Ont.
- L**ONDON CARRIAGE FACTORY.—Hacks, Phaetons, Sleighs, etc. JOHN CAMPBELL, Prop.
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- Agricultural Savings & Loan Company**
ESTABLISHED 1872.
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| Subscribed Capital | 630,000 |
| Paid-up Capital | 616,583 |
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- Bankers, Bank of Toronto & Merchants' Bank.**
Liberal rate of interest allowed on savings deposits. Money to loan on real estate on favorable terms. For particulars apply to
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Send for Illustrated Catalogue, and send THIS PAPER with your order for our NEW RIBBER and we will allow \$10 PREMIUM DISCOUNT.

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THE HAMILTON FERTILIZER & CASING WORKS
 Manufacturers of the following celebrated brands:—

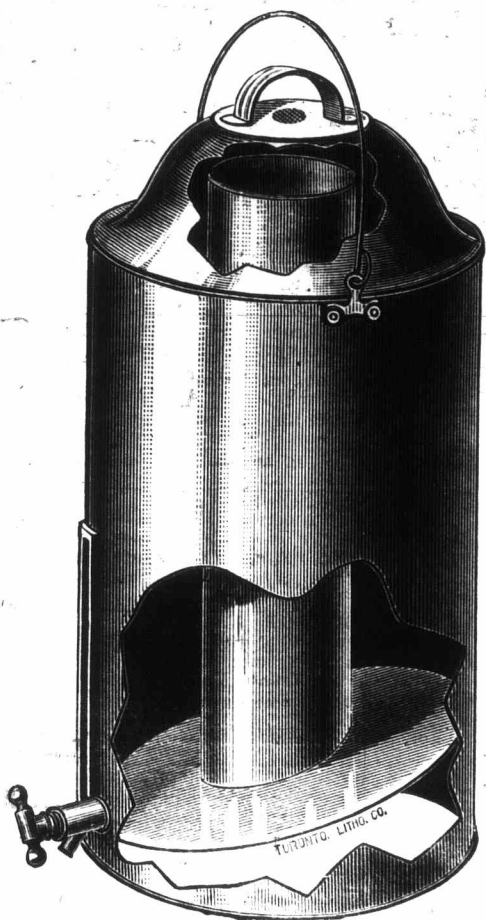
**Farmers' Pride,
 Pure Bone Meal,
 Pure Animal Fertilizer,
 Sure Growth and
 Grape Food**

Send for circular containing analysis of above.
 Address

HAMILTON FERTILIZER & CASING WORKS,
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TO THE DEAF.—A Person cured of Deafness and noises in the head of 23 years' standing by a simple remedy. Will send a description of it FREE to any person who applies to **NICHOLSON,** 30 John Street, Montreal, P.Q. 277-y

L'ORIGNAL CREAMER.



This Can works at every farmer's well, with or without ice, by changing the water once after the heat of the milk is off. It will be perceived that in this Can there is a central tube that admits the water to ascend until it reaches the head of the exterior body of water, and thus we avail ourselves of the cooling and purifying influence of water on the inside and outside of the can. With this can we guarantee one-sixth cream during hot or cold weather, and better results generally than with any other process. We build these double creamers to suit all sizes of dairies. Send for price list. Agents wanted.

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The Forest City Business College, London, Ont., is acknowledged to be the Model Business Training School and Shorthand Institute of Canada. Its graduates in both departments are employed in some of the best business houses in London, Toronto, Hamilton, Brantford, Woodstock, Belleville, Detroit, Chicago, etc. More than thirty of the past season's students are in good paying positions. We educate for business. Catalogues and particulars upon application.

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A BUSINESS COLLEGE conducted by EXPERIENCED OFFICE MEN. For 40-page announcement address 284-d **SPENCER & McCULLOUGH, Principals.**

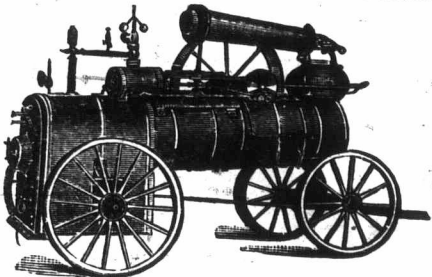
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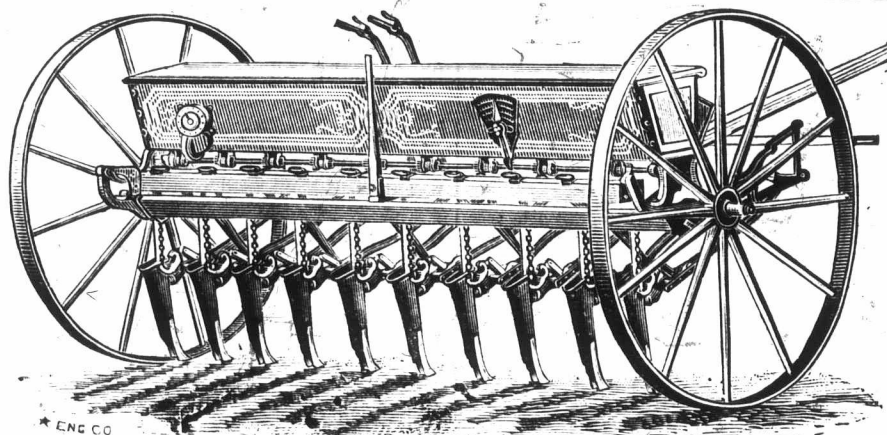


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HOOSIER STEEL FRAME GRAIN DRILL



GUARANTEED THE BEST IN THE WORLD.

No Other Drill made can be instantly regulated to run at any desired depth without stopping the team. No Other Drill will sow all kinds of grain thoroughly, even and properly covered at a uniform depth in all kinds of soil. No Other Drill commences to sow the instant the horses commence to move, and misses no ground when starting in after turning. No Other Drill equals the Hoosier when used as a cultivator, and no single cultivator surpasses it, thus combining two implements in one. If no agent convenient to you, drop us a post card for catalogue and prices.

NOXON BROS. MFG. CO

283 **PETERBOROUGH, ONT.**

284-b

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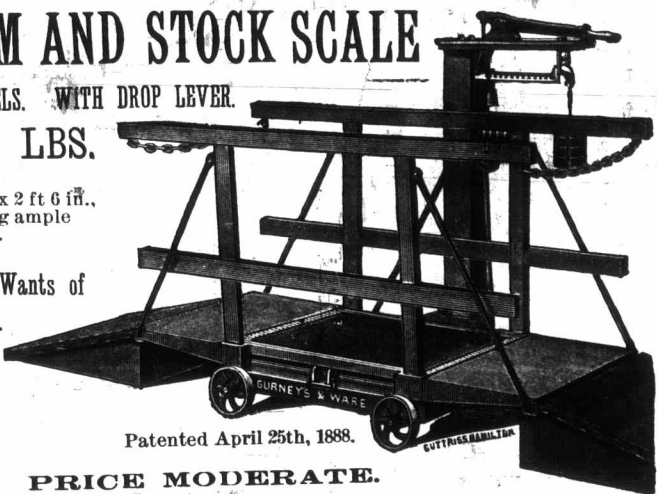
GURNEYS' FARM AND STOCK SCALE

PORTABLE, ON WHEELS. WITH DROP LEVER.
CAPACITY, 3,000 LBS.

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

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

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



Patented April 25th, 1888.

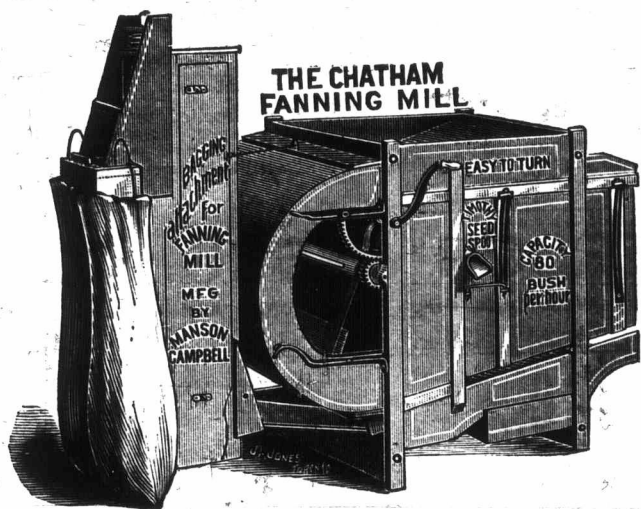
PRICE MODERATE.
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MANUFACTURERS OF ALL KINDS OF SCALES.

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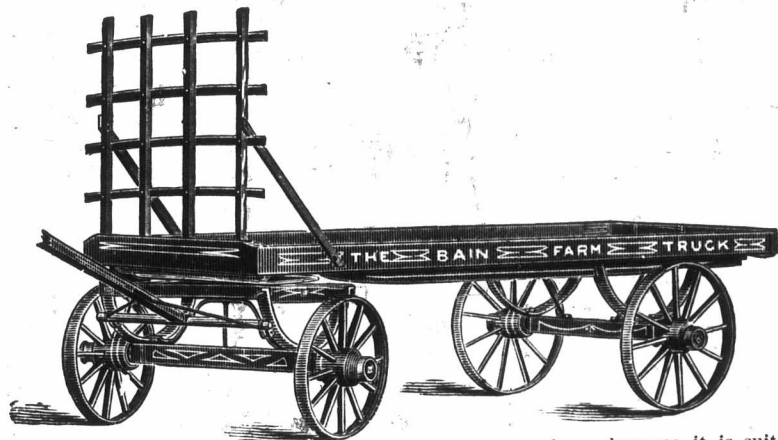


MANSON CAMPBELL,
CHATHAM, ONTARIO.

282-c

Farmers desiring the best fanning mill manufactured, should order the Chatham Mill, which has all the latest improvements. My sales last season were 2,500. This speaks for its popularity. The Bagging Attachment has been greatly improved, and put in front of the mill, thus saving considerable room. It works very easily, will bag any kind of seed, from beans to timothy. One man less is required by using my bagging attachment. If my mills are not kept by any agent in your locality, send for descriptive circular and prices, and have a mill shipped direct.

BAIN WAGON CO.'S FARM TRUCK.



THIS cut represents the most convenient Wagon ever put on a farm, because it is suitable for all kinds of work, and always ready, no changes being necessary.

THIS WAGON was invented and first introduced in Michigan, U. S., and is now very extensively used by leading farmers in the United States.

AND EVERY WAGON made and sold by us in Canada is giving entire satisfaction. For further particulars and prices.
279-ff

Address **BAIN WAGON CO., Woodstock, Ont.**

STOCK GOSSIP.

This number contains an advertisement from Mr. John Fennelle, Berlin, offering some choicely bred cows, heifers and bulls, all registered in the A. J. C. C.

Geo. McKerrow, in Breeder's Gazette of June 12th, gives an account of sheep being wintered on ensilage morning and night, and straw at noon; they gained flesh. Ensilage, at \$2 per ton, would make the cost for 180 days' feed \$1.44.

Nine fresh outbreaks of swine fever were reported in Ireland for the week ending 15th inst., three in the union of Gorey and one in each of the following unions:—Newcastle, Kilmacthomas, Waterford, South Dublin, Mountmellick, and Wexford.

On June 21st, Messrs. Smith Bros., Churchville, Ont., brought from Quarantine six Holstein-Friesian heifers. They were Baroness Clothilde, Netherland Statesman's Benola, Netherland Heroine, Aggie Idaline 6th, Princess, Modest Girl 3rd, and Aggie Gem 2nd.

Mr. Wm. H. Borrowman, son of Mr. Wm. Borrowman, Middleville, Lambark, Co., one of the first subscribers to the ADVOCATE, called on us a few days ago and showed us samples of oats five and one-half feet high, and rye seven feet high. This is one of the localities that suffered so severely from the drought last season. Mr. B. reports crops of all kinds extra good in that locality.

John Jackson & Sons, Abingdon, report as follows:—Our flock of Southdowns have done remarkably well this year, have a splendid crop of lambs, and the clip of wool was very good, some as high as 11 lbs.; the demand has been better so far than I ever knew it to be heretofore. We are making another importation this season, which will arrive in a few days, including first prize winners at the "Royal." The sheep business, generally, is looking up.

Just as we go to press, Mr. Robert Marsh, Richmond Hill, writes us to the effect that his old established flock of Southdowns are still in existence, and were never in better shape. He reports this year's crop of lambs beats all previous records—one flock of twenty-two ewes producing thirty-nine lambs, and not a single ewe on the place failed to raise one or more lambs. The sales have been quite satisfactory, and Southdowns are being appreciated.

J. G. Snell & Bro., Edmonton, Ont., writing July 17, say:—We have just received a letter from Mr. Main, in which he says he has purchased for us in England twenty-six head of Cotswolds and fifteen head of Berkshires. Among the Cotswolds are the first prize pen of five shearing ewes, and the first prize ram lamb at the Royal Show, besides winner at other shows. In the lot of Berkshires is the sow that won first prize and champion prize for the best Berkshire sow at the Royal Show.

The Statistical Abstract and Record of Canada for the year 1888, published by the Department of Agriculture, is to hand. This is a pamphlet of over five hundred pages, and contains the leading tables of the previous issues, and a number of new ones. This work is replete with information of interest to every Canadian, to give even a synopsis of which would take more space than can be afforded. It may be had for asking from the Department of Agriculture, Ottawa.

The Dominion Central Experimental Station have recently made the following purchases:—Shorthorns—Three females from James Graham, Scugog; three females from Jno. Miller & Son, Bringham; two young bulls and four females from Richard Gibson, Delaware, Jersey; Six females and one bull from McLean Howard, Toronto, Ayrshires—Six females from James Drummond, Pettit Cote, Que.; a heifer and bull from Mr. David Nichol, Cataraqui, Ont. Holsteins—Three heifers from Smith Bros., Churchville. Polled Angus—Five heifers and one bull from the estate of the late Hon. Mr. Pope.

Wm. Davies & Co. write:—We are pleased to report that nearly every mail brings letters from farmers and others, expressing their interest in the subject of "Hog Raising and Feeding," and their determination to go into it much more extensively. As an incentive to do so would point out that the demand for live hogs is far in excess of the supply, as any of your readers may see who will look at the report of the Toronto live stock market. They will also see that they are worth 54c. per pound, at the same time good butcher cattle are only worth 34c. Surely the contrast between these prices and the fact that it costs more to fatten cattle than hogs, should encourage every farmer to raise at least twice as many.

A fitting sequel to the jubilee meeting of the Royal Agricultural Society will be the series of high class pedigree stock sales that are announced for the following week. On Tuesday 2nd prox., Mr. John Thornton will sell at the Prince of Wales' farm, near Wolferton station, 64 lots of Shorthorn cattle and 31 lots of Southdown sheep, when it is expected H. R. H. will be present. The next day Mr. Thornton will sell at Streetly Hall, Linton, Cambridgeshire, the celebrated flock of Southdown sheep the property of Mr. Henry Webb, largely descended from the historic Abraham flock of his father, the late Mr. Jonas Webb. When the Abraham flock was dispersed in 1862 the 9.7 head averaged £11 15s. 9d. and Mr. Henry Webb secured 70 of his father's best old ewes and several rams; from these he has raised a flock, combining purity of blood with hardy constitutions; that any farmer might breed from for profit, and from which fanciers may select show-yard winners.

STOCK GOSSIP.

A few years ago Mr. Linton, of Aurora, was banqueted by his townsmen on his arrival from England with several head of imported Shorthorns. About the same time a fine turkey disappeared from his (Mr. Linton's) farm. It afterwards transpired that Mr. Linton had been fed on his own turkey, a sneak-thief having stolen it and sold it for the occasion.

H. J. Davis, Woodstock, July 18, 1889, reports the following sales:—One Shorthorn heifer to Mr. A. West, Oxford Co.; one grandly-bred Berkshire boar and sow to Elias A. Fligg, Meaford Co.; one sow to Ira Davidson & Bro., Florence, Ont.; one sow to G. Gould, jr., Rutherford, Ont.; one boar and sow to W. B. Rittenhouse, Jordan, Ont.; one boar and two sows to Col. A. Audel, Montreal, Province Quebec; one boar to Wm. Temple, Jerseyville, Ont.; one sow to A. Rowell, Woodstock, Ont.

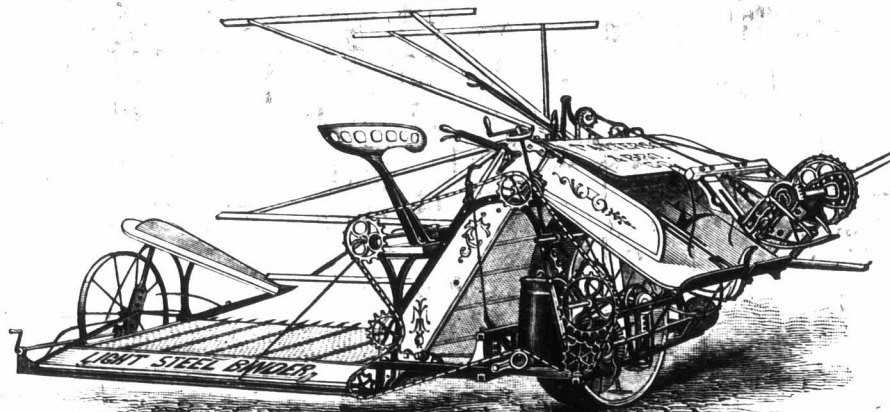
John Campbell, jr., of Woodville, Ont., has this summer personally selected an importation of Shropshire sheep from the flocks of Messrs. H. Williams, T. & T. Bradburne, W. H. Clarke, A. T. Berry and P. & S. Evans. The lot includes several winners at the Bath and West of England, the Royal at Windsor, and the Shropshire and West Midland Shows. Special mention may be made of a Rector ram, the choice of Messrs. Evans, of Uffington's fifty shearing rams, eighteen of which were sired by the renowned Rector, which they purchased when six years old, at 115 guineas, and was previously let out for the season at 200 guineas. Rector was not only first winner at the R. A. T. E. Show, but also the sire of winners.

Messrs. Green Bros., of the Glen Stock Farm, Innerkip, report the following sales:—A roan yearling bull, Highland Duke, to Messrs. A. & J. Knox, Chesterfield; a red and white yearling bull, Pioneer, to Mr. T. Simpson, of Wardsville, Ont.; a roan yearling bull, Draes, to Mr. Robert Scott, of Blandford, and a red yearling bull to Mr. Jos. Hill, Paris, Ont. They have also sold to an American buyer for shipment to Buenos Ayres, South America, their imported stock bull, Eclipse, a four-year-old cow, Daphne, got by the Earl of Mar, and a red heifer calf. Included in the lot was the handsome bull Premier, got by the Earl of Mar, which was purchased from Mr. Robt. Scott, Blandford. This is, we believe, the first lot of Shorthorns shipped to South America from Canada.

H. George & Sons, Crampton, Ont., have made the following sales during the last few weeks:—M. Cochran, Almonte, Chester White boar and sow; J. Carter, Copenhagen, Chester White boar; J. Mitchell, Wardsville, Chester White boar; Seth Bar, Tilbury, Chester White boar; H. Hering, Avon, Chester White boar; J. Freeman, Culloden, two Chester boars and two sows; Andrew Zellar, New Hamburg, two Chester White boars and two sows; Jacob Youmans, Renton, Chester White boar; W. C. Shearen, Bright, Chester White boar and two sows; S. A. Jackson, Derwent, Chester White boar and sow; R. C. Nixon, Esquimaux, Chester White boar and sow also Berkshire boar; B. Stohart, Peterboro, Berkshire boar and sow; M. L. Whitney, Brunner, Berkshire boar; S. S. Dickinson, Port Hope, two Suffolk sows. They reported sales good and have still on hand over seventy pure-bred pigs. We have also imported from England this month the celebrated shire stallion Lenox (No. 7574), Vol. X., English Stud Book; bay, foaled in 1887, bred by Hugh Ashcroft, Esq., Tarleton, Preston, England; sire, Teuton (4128); dam by Royalist (2489); great dam by Adam (65). Lenox took first prize as yearling at Preston, second as two-year-old at Wigton; also Jean, Vol. X., bay, white face and hind legs, foaled 1887; bred by James Jackson, Oakenclough Paper Mills, Garstang; sire, Adam (65); dam, Julianne, (Vol. VIII., IX., by Cromwell (2415), English Stud Book.

The North-British Agriculturist says:—The exporting season of 1889 has begun in good earnest, upwards of forty head of pedigreed horses having left the Clyde for the United States and Canada during the past few days. The total number exported since 1st January is quite equal to the number exported during the corresponding period of the previous year. Half a dozen of those exported lately go to Winnipeg, and are the property of Messrs. J. and A. McHattie, Aberdeen. Mr. Joseph Vance, Hamburg, Ontario, purchased four well-bred horses from Mr. C. Lawson, Mains of Cults. Eight animals of approved breeding and good quality were shipped by Mr. Gilmore to Toronto at the same time. A first-class selection of eight well-bred horses was made by Mr. Tolbert W. Evans, Yelverton, Ontario, from the studs of Mr. Walter Park, Hutton, and Mr. Arthur Lang, Garneyland, Paisley. Amongst these were two capital colts purchased from Mr. Lang, one of which was third at Barrhead, fifth at Maryhill, and fifth at Paisley, and both of which are well-colored, highly-bred animals, calculated to improve the native stock of Canada. Amongst those purchased from Mr. Park were several promising animals, got by Sir-Hilderbrand, 1921, which was first at the "Royal" in 1886, and Jordanshaw, 3343, the Kinross premium horse of this season. An outstanding filly in this lot was Paisley Gem, a beautiful yearling, which gained first prize in the "Derby" at Paisley last Thursday. This filly was bred by Mr. Love, Margaret's Mill, Kilmalcolm, and got by Jordanshaw, out of the Mare Miss Lawrence, which in 1884 stood second to Edith Plantagenet at Glasgow summer show. The shipment made by Mr. Evans last year was one of the best that left Scotland, and the farmers of Canada have appreciated the service rendered by the importation of a better class of animals.

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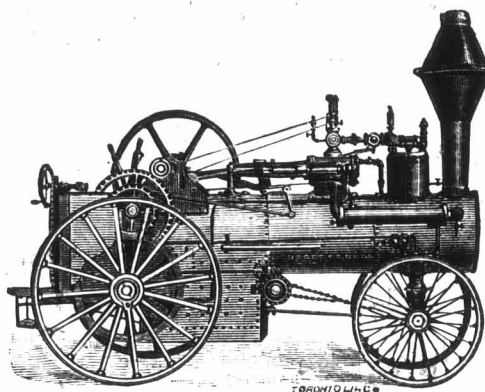
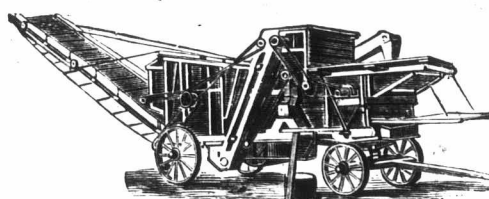
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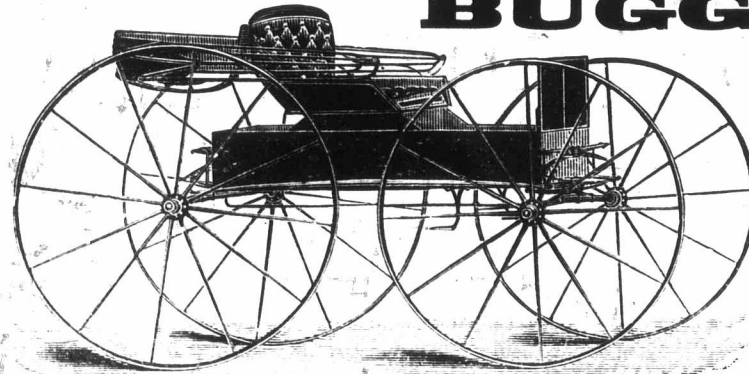
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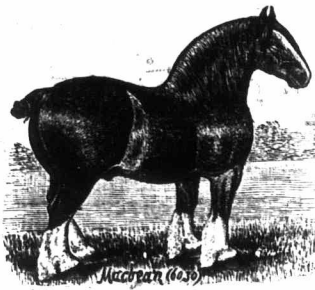
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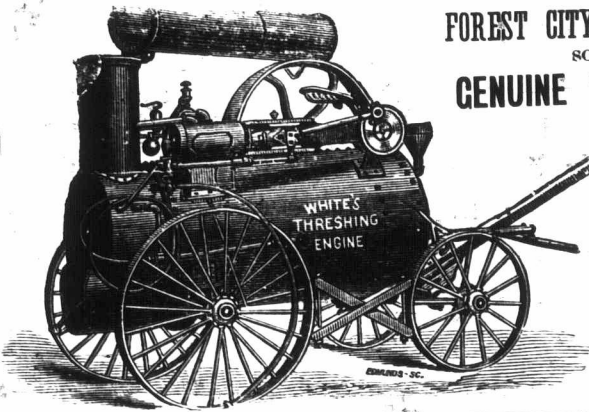
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STOCK GOSSIP.

The Dominion Government are securing a number of herds of cattle of different breeds for experimental purposes.

Tisdale's Brantford Iron Stable Fittings. We lose no job we can figure upon. Catalogue sent free. The B. G. Tisdale Co., Brantford, Canada. Advt.

Professor Robertson's notes for cheesemakers for August will be found of special interest to that class, and farmers as well. This bulletin should be in the hands of every one interested in dairying.

Before this issue of the ADVOCATE reaches our readers, Mr. Jno. Dryden, M. P. P., of Brooklin, Ont., will have arrived home from England with a selection of Shropshires, among them some winners at the Royal.

Mr. J. C. Snell, Edmonton, Ont., sails July 12 from Liverpool, with a consignment of thirty-five Berkshires and twenty Cotswold sheep, selected from leading herds and flocks in Britain; and including some of the prize animals at the Royal Show. Mr. Snell is expected home about the last of July.

Mr. D. O. Fox, of Oregon, Wisconsin, shipped from this city, on Tuesday, July 23, ninety-three head of Shropshires, purchased from Messrs. Frank R. Shore & Bros., White Oak; Wm. H. Beattie, Wilton Grove; H. Snell & Sons, and Jas. McFarlane, Clinton, and Mr. Duncan, Brucefield. Among those from Mr. Beattie was the ram Minton's Pride, for two years his stock ram.

Mr. C. G. Geddes Esq., of Canyon Ranch, Pinchem Creek, Alta, N. W. Territories, bought from John Leys, M. P. P., Toronto, from his Oakdale farm, four cows imported from Holland, one cow calved in quarantine at Halifax, two three-year-old heifers, by the great prize-winning bull Adanac, bred at the Ontario Government farm at Guelph from imported dams, and the grand young bull Bismarck, a worthy son of the famous bull Presto. All the females are with calf by Adanac, No. 100, Holstein Friesian Association of America and 153 Am. Br. N. H. B. This sale speaks well for the quality of stock at Oakdale farm and is a credit to the country. In addition to the above choice herd of Holstein cattle Mr. Geddes has purchased a number of fine mares, some Shetland ponies, pigs, sheep, goats and a large variety of fowls, including a fine peacock and a couple of peahens. All are the best that money could buy in this province.

NOTICES.

Mr. John Abell, of Toronto, is now very busy building the Toronto Advance threshing machines and steam engines. He has at the present time forty of these outfits complete, with Abell's new patent straw burner, ready for shipment to Manitoba. He has also ready for shipment one of his large machines, sixty-inch body and forty-inch cylinder. Our readers should send for his illustrated and descriptive catalogue.

Modern Light and Heat, the leading electrical journal of New England, predicts that the electric exhibition, to be held in connection with the St. John Summer Carnival, will be one of the most imposing displays ever made, as nearly every electric manufacturing company in the United States will exhibit its specialties. Nothing of the kind has ever before been attempted in Canada. The exhibition will open on Monday, the 22nd.

The Ontario Pump Co., of Toronto, who have been advertising in the ADVOCATE for years, are constantly receiving enquiries about windmills from our subscribers. To give our readers an idea of the extent of their business, we might mention a few of the contracts they are working on at the present time. The Canadian Coal and Colonization Co., (Limited), have ordered eleven 14-foot geared mills, one 14-foot geared, seven 10-foot, and one 12-foot pumping mills, eleven 7x10 foot tanks; in all twenty outfits. The above company have eleven farms of 10,000 acres each. They are also building six complete water stations, consisting of six 20-foot mills, six 50,000-gallon tank, six 5-inch double action Curtis pumps, six sets tank fixtures, also delivering the C. P. R. an 18-foot Curtis pump; they are also working on an \$8,000 contract for the Shelburne village water works, consisting of a 30-foot windmill, 80,000 gallon frost proof tank, elevated 60 feet to bottom of tank. They put down the artesian well, which has a capacity of 40,000 gallons per day.

Dates of Principal Fairs to be Held in Canada and the United States.

NAME.	PLACE TO BE HELD.	DATES.	SECRETARY.
44th Provincial Exhibition of Agriculture and Arts Association of Ontario.	London	Sept. 9 to 14th.	Henry Wade
Midland Central Fair	Kings'ton	Aug. 28th to Sept 7th	R. Meek
Eastern Townships Agricultural Association	Sherbrooke, P. Q.	Sept. 3rd to 5th	E. Winn Farwell
Industrial Exhibition	Toronto	" 9th to 21st.	H. J. Hill
Central Canada Fair Association	Ottawa	" 9th to 14th	C. R. W. M'Cuair
Brantford Fair	Brantford	" 10th to 12th.	R. M. Wilson
Peninsular Fair	Chatham	" 17th to 20th.	John Tiesman
South Renfrew Agricultural Society	Renfrew	" 23rd to 27th.	W. E. Smallfield
Great Central Fair	Hamilton	" 24th to 26th.	C. R. Smith
North Lanark Agricultural Society	Almonte	" 24th to 26th.	Wm. P. McEwen
Lindsay Central Fair	Lindsay	" 24th to 26th.	James Keith
Ontario and Durham Exhibition Society	Whitby	" 24th to 26th.	W. R. Howse
Southern Counties Fair	St. Thomas	" 24th to 27th.	John A. Kains
Peterborough Central	Peterborough	" 24th to 27th.	Wm. Collins
Great Northern Exhibition Association	Collingwood	" 25th to 27th.	T. J. Crawford
Bay of Quinte	Belleville	" 25th to 28th.	Wm. Smeaton
Guelph Central	Guelph	" 25th and 26th.	R. McKenzie
Great North-Western Exhibition	Essex Centre	Oct. 1st to 3rd.	A. E. Jones
The Northern Exhibition	Walkerton	" 1st to 4th.	Jacob Seegmiller
South Dorchester	Belmont	" 2nd	Wm. Black
County of Prince Edward	Pictou	" 2nd and 3rd.	Thos. Bog
West Elgin	Wallacetown	" 2nd to 3rd.	D. Campbell
Ontario Central	Port Perry	" 2nd to 4th.	H. Gordon
South Grimsby	Smithville	" 3rd and 4th.	W. H. Morgan
North Renfrew Exhibition	Beachburg	" 3rd and 4th.	John Brown
North Perth Agricultural Society	Stratford	" 3rd and 4th.	John Brown
South Oxford Union Exhibition	Otterville	" 4th and 5th.	Alex. McFarlane
Norfolk Union Fair	Simcoe	" 15th and 16th.	J. Thos. Murphy
Ontario Provincial Fat Stock Show	Toronto	Sept. 17th to 19th.	Henry Wade
North Western Exhibition	Goderich	Sept. 23rd to 25th.	R. C. Hays
Lincoln County Fair	St. Catharines	" 23rd to 25th.	Albert Pay
County of Haldimand	Cayuga	Oct. 1st and 2nd.	Thos. Bridger
East York Agricultural Society	Markham	" 2nd to 4th.	Jas. J. Baker
County of Yarmouth	Yarmouth	" 10th to 11th.	Thos. B. Crosby
P. E. I. Provincial Exhibition	Charlottetown	" 2nd to 3rd.	
World's Greatest Fair and Exposition	Detroit, Mich.	Sept. 17th to 27th.	E. W. Cotterell
Ohio State Fair	Columbus, Ohio	" 2nd to 6th.	L. N. Bonham
Buffalo International Fair Association	Buffalo, N. Y.	" 3rd to 13th.	C. W. Robinson
Tri-State Fair	Toledo, Ohio	" 9th to 13th.	John Farley
Michigan State Fair	Lansing, Mich.	" 9th to 13th.	J. C. Sterling
New York State Agricultural Society	Albany, N. Y.	" 13th to 18th.	J. S. Woodward
N. Indiana and S. Michigan Agricultural Society	Mishawaka, Ind.	" 16th to 20th.	C. G. Towse
W. Michigan Agricultural and Industrial Society	Grand Rapids, M.	" 23rd to 27th.	James Cox
Indiana State Fair	Indianapolis, Ind.	" 25th to 29th.	Alex. Heron
St. Louis Agricultural and Mechanical Association	St. Louis	Oct. 7th to 12th.	Arthur Uhl

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CORRESPONDENCE.

SIR.—I have a cow that has a lump under her jaw; it has been there two years; it beals and breaks. Three calves took the same disease last winter. Tell me if they can be cured, and how to treat them; also is the cows' milk good for use in the family?
E. B. H., Watford, Ont.

[The disease is known to veterinarians as Ostea Sarcoma, and cannot be cured. Many would make beef of the animal, but as it is a disease of the bone, and the blood becomes affected, it is hardly right to do this. The milk being elaborated from the blood, is decidedly unfit for food.]

New Agricultural Publications.

THE CANADIAN DRAUGHT HORSE STUD BOOK.—We have received from Mr. Henry Wade, Secretary of the Agricultural and Arts Association of Ontario, a copy of Vol. I. of the above work, of which he is editor. It contains the pedigrees of 243 stallions and 310 mares; is neatly got up, and nicely bound in muslin. The work was compiled and revised by a committee elected from the Canadian Draught Horse Association, and the Agricultural and Arts Association of Ontario.

BUTTER TESTS OF REGISTERED JERSEY COWS: WHEREIN THE YIELD HAS AMOUNTED TO FOURTEEN POUNDS OR MORE PER WEEK.—The above is a neat little muslin bound volume of 126 pages, with covers of a rich butter color, and gold letters. It contains the authorized tests of 157 cows, to which is added differences in Dairy Products, by Prof. Henry E. Alvord, and numerous facts about Jersey Cattle. It is compiled and published by the American Jersey Cattle Club, and contains much valuable information, not only for breeders of Jersey cattle, but dairymen in general. The more so from the fact, that the grain fed is given in every instance. The twenty-seven pages devoted to "Numerous Facts about Jersey Cattle" are interesting, and the tables on "Differences in Dairy Products" are of great value to every man who buys food. The work may be had from Mr. Wicks, Secretary of the A. J. C. C., New York City.

James Slocum, proprietor of the American Creamery, published at Holly, Mich., has recently compiled and published a list of the creameries in the United States, Canada and Manitoba, which is the most valuable and complete work of its kind, ever issued. It contains the name and addresses of 2,100 creameries. Anyone desiring a copy should write the above, enclosing \$1, and a copy will be sent pre-paid.

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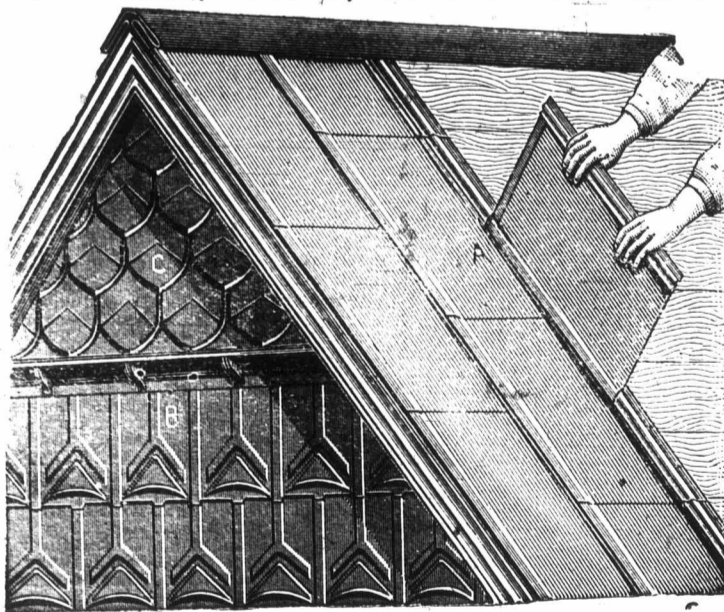
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