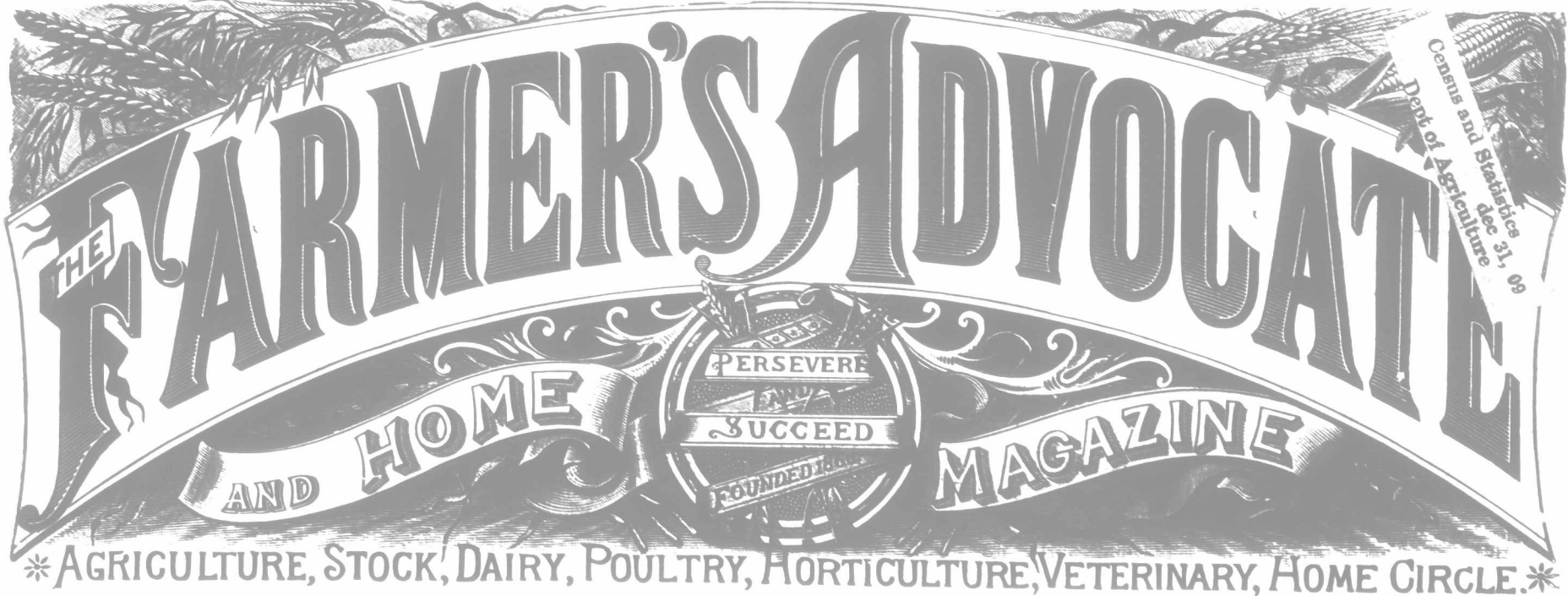


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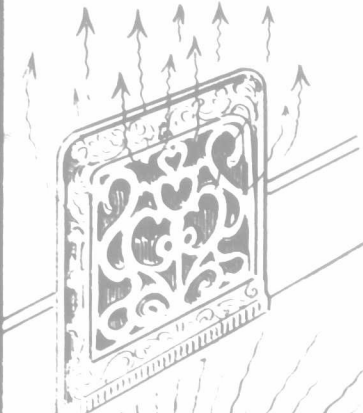
Vol. XLV.

LONDON, ONTARIO, AUGUST 18, 1910.

No. 934

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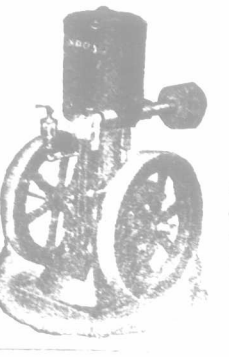
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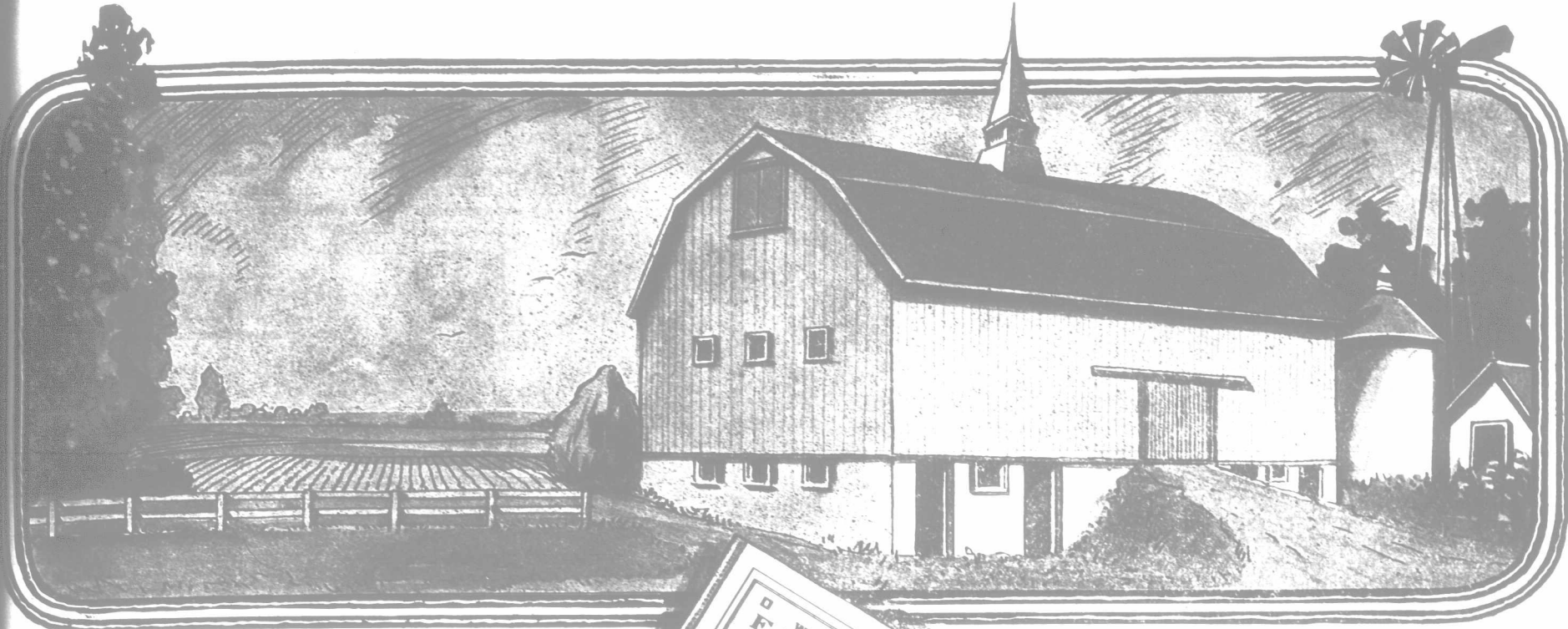
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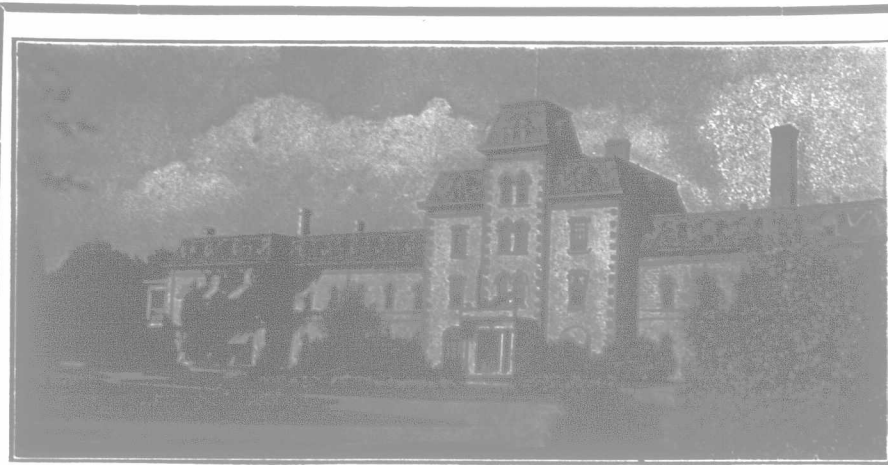
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Established
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LONDON, ONTARIO, AUGUST 18, 1910

No. 934

Vol. XLV.

EDITORIAL.

The public school has too long been used as a sort of donkey-engine to make up select trains for the High School, while the vast majority of the youth are educationally sidetracked.

Sir James Whitney declares for a policy in the Ontario Department of Education that will dethrone the High-school Entrance examination idol, and give the public school a status worthy of the name. Right!

The adoption of one or two good new ideas in any man's practice, yielding promise of something better than the old-time vogue, adds zest, as well as profit, to the working of the farm. Build a silo, grow corn, try alfalfa, adopt a short rotation, bringing in clover every three or four years; raise a colt or two each year; invest in a few sheep; pay reasonable attention to the poultry-yard, and see how much more interesting your farming will become.

Folly may be stupid or ingenious. The vacuity of stupid folly is apparent at a glance. Ingenious folly may be a tolerable counterfeit of wisdom, but is folly, all the same. Protectionist folly is usually of the ingenious kind. It is ingenious in the subtlety of its appeal to avarice, narrowness and shortsightedness. It takes a far-sighted and an eminent position to survey a wide field. Similarly in logic, a broad mind is required to grasp large principles and perceive ultimate effects.

It still remains a fact that about the least likely place to find a good cheese is at the home of the cheese-factory patron. Many makers have established the practice of retaining for the use of the patrons those cheese which, with age, are most likely to develop off flavors, or worse faults. Aside from this, green cheese are almost universally cut up for the patrons. Such cheese are not very digestible, and are not nearly so palatable or wholesome as ripened cheese. Ask your maker to age and ripen good sound cheese for you, his patrons. Some do it, and all would, if requested to do so. Patrons are surely entitled to the best.

There are two factors in all communities which are the natural vitalizing, co-ordinating centers toward which the whole community should gravitate, and from which new forces should be emanating. These are the church and the school. But until these centers themselves become filled with the life which their constituency needs, they can neither co-ordinate nor vitalize it. As missionaries learn to speak the language, think in the same channels, and feel the same feelings as the people whom they seek to benefit, so must the pastor and teacher become imbued with the life of the community, that they may assist in solving its problems of life.

Not men who stand by the party—committing public wrongs for private ends, under cover of the party cloak—but men of principle, who stand for the public good, are being demanded as servants in high places by the citizens of the American Republic. They are tiring of the party stand-patter of whatever stripe he may be, since both parties have been too evidently in collusion with the selfish moneyed interests. In short, politicians of the old school must give way to those who seek to serve without taint. If Canadian party machinery and equipment would avoid landing on that junk-heap of useless, rotten implements, it had best read the handwriting on the wall, and govern itself accordingly.

Too Busy to See His Mistakes.

In conversation, lately, with a local milk dealer, who has acquired a farm, now being worked on shares, he dropped a remark which started a train of thought: "I can see mistakes we're making, which the man on the farm can't see. For instance, we only seeded down ten acres of our grain crop this year; we should have seeded twenty. We ought to have sown some alfalfa, and we need a good rotation. In these and dozens of other ways I can see mistakes made on that farm right along, but he doesn't look at it the way I do, and I have to be careful with my suggestions."

Now, this milkman was not a practical agriculturist, but since buying his farm, a year ago, he has been studying the business with an open mind. When he strikes an idea in an agricultural journal, a magazine, or any other source, he is keen to know whether that can be applied to advantage in his case, and, being apparently a level-headed man, has avoided the delusions fairly well, and seized upon the solid, practicable ideas.

The point we wish to emphasize is that he can see the mistakes more clearly than the practical farmer on the ground doing the work. The latter's attention is so closely occupied with the details of his duties that he cannot get a proper perspective of his business or of the industry in which he is engaged. He does not see that there are better ways of doing most things than any yet practiced. He settles into a cog-wheel grind of daily routine, and thus misses the opportunities which a larger view would suggest to his mind. He sinks into ruts, stays in them, and wears them deeper with years.

Exactly the same principle applies in any other business. The general manager who allows himself to be occupied with details, till he has not time to read, mix with competitors, and keep abreast of the times, quickly becomes a back number. One of the surest ways of sealing one's eyes to new opportunities is by plodding pursuit of those which one originally started out to follow. Times change, and those who change not with them fall relatively back.

What is to be done about it? Fold our hands and do nothing but manage the farm? Scarcely. Farming in Canada, being usually conducted on a small scale, will scarcely support an idle manager supervising one or two laborers. The manager himself must work with his hands, and we are glad, for many reasons, it is so. We take no stock in "gentlemen farmers." But let him beware of working too much. Let him avoid toiling such long hours that he has no leisure or energy in the evening to read and think. He can lose dollars faster through disuse of his brain than he can make them with his hands. We know by experience it is often difficult to secure sufficient time for reading in the summer. Duties crowd, and the temptation is strong to yield. It seems imperative to keep at it, or else let the work get behind. Sometimes, of course, in emergencies, it is necessary, but the manager's surplus time and effort should always be held in reserve for just such emergency, and should only be bent to the work when unavoidable.

In the main, the most important duty that confronts any farmer is to manage his farm. That he may do this well, he must keep a keen edge on his intellect, by reading, study, occasional trips to a distance, where he can see something new, as well as by religious abstention from that temptation to potter which keeps him a servant rather than a master of his work. Lift your eyes from the deadening grind of daily routine. See, think, practice!

Elevate the Public School.

"The Farmer's Advocate" is pleased to note the candid observations of Sir James Whitney, Premier of Ontario, on the subject of the High-school Entrance Examinations, over which there has been an outcry because of the number of candidates who failed to pass this summer. Sir James bluffly declares that this examination has become a sort of fetish, impairing the training of the public schools, interfering with their efficiency, and has proven bad all around.

The percentage of pupils who go on to the High Schools and Collegiate Institutes is but a small fraction of the whole, and the education of the majority is therefore lamentably defective. Leaving the public school at about 13 years old, they do not read, write or spell properly, have little command of the ordinary use of figures, or ability to observe or express themselves intelligently. Such evils are intensified by a system of cramming for an examination, and when we consider that the general programme and methods of the public school are so unrelated to the great national industry of agriculture and the home life, it is high time for thoroughgoing reformatory measures that will exalt the public school, making it an end in itself, instead of lowering it to the position of a mere feeder to high schools and professions, a position which "The Farmer's Advocate" has held for years. It is gratifying to observe that Sir James Whitney announces that the Minister of Education hopes to make such changes in the regulations as will bring about this result. The false notion that measures a teacher's efficiency and value to the people by the number of scholars who could "pass the entrance" has been mischievous, and public opinion cannot too vigorously or too soon demand a change.

In a recent issue the Christian Guardian, of Toronto, makes the following rational observations regarding this craze for rushing the pupils through the public schools: "We like our children to get on in school. Just now there are hundreds of parents in the Province of Ontario who are very much exercised over the fact that their boys and girls did not succeed in passing the entrance examination into the high school because, as is alleged, that examination was this year exceptionally difficult. The parents whose boys and girls did succeed in getting through can hardly forbear assuming a somewhat superior air, while those parents whose children were not successful are resenting the situation and demanding a re-estimating of the papers. But after all the most important question, if we could but see it, is not whether our children are getting their education quickly, but whether they are really getting the foundations of an education that is solid and worth while. Speed is not everything here; in fact, the desire for speed is one of the obstacles in the way of the truest and best success."

As the Royal Commission on the subject of technical education meets at various points during the present summer and autumn, the condition of public-school education and its relation to the agricultural industry and the home cannot be too strongly pressed upon public attention. The work of this commission on education, to which all the Provinces are consenting parties, is of first-rate and far-reaching importance. It will, no doubt, have marked effects in recasting educational methods and in the question of Federal aid for educational purposes. As an industry at once technical and scientific, agriculture as affected by our scheme of public-school education is bound to come within its purview.

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If Trade is Good, Why Obstruct It?

By opening avenues of trade, negotiating trade treaties and otherwise, nations recognize the economy and beneficence of international exchange. There is mutual profit in a fair trade, or, as the catch phrase has it, "Fair exchange is no robbery." Strange, then, that tariffs and other devices are so ingeniously invented to obstruct a commerce which instinct, reason and experience commend as beneficial. Of course, the incongruity arises from a conception that it is more blessed to sell than to buy. It is true that, in commerce the onus of effecting the exchange is usually upon the seller. Nevertheless, in the main, both sides of the transaction are advantageous. Inasmuch as imports (or purchases) have to be paid for with exports (sales), therefore, to obstruct imports is to curtail exports. If a nation sets itself to the production of something it has hitherto imported, it is simply diverting its energies from a more profitable extension of some other line of production. The few exceptions to this rule do not vitiate it as a general principle. For a new and comparatively undeveloped country such as Canada was thirty years ago, with but limited range of occupation, and situated alongside of a great nation with large cities and established industries, whose scale of operations enabled them not only to specialize highly, but to organize strong sales departments, thus frequently disposing of their output against equivalent or greater value offered by weaker houses—for such a country there are certain logical arguments in favor of a moderate protective tariff, but even under those circumstances it possesses certain divided disadvantages, and readily becomes a lever of greed and extortion. High tariff, under any circumstances, is to be avoided, and as our country develops, we shall do well, irrespective of the policies adopted by other nations, to gradually whittle our import duties down to a fine point. If we see fit to encourage utilization of natural products in our country, it may best be accomplished by export duties on raw materials.

The Farmer and the Tariff.

Editor "The Farmer's Advocate":

A good deal of interest has been taken in the tariff, and I am grateful for the attention paid to my letter of 7th July on the wool problem. The discussion has been on the whole good-tempered, and intelligent, and it is a good sign that you and all your correspondents have tried to look at these questions from the standpoint of the general welfare and not from the narrower interest of the farmer alone.

There is just one personal allusion. One of your correspondents broadly insinuates that in showing the defects of the present wool tariff I am in some way the mouthpiece of the Canadian Manufacturers' Association. In 1905 I gave an address at the Guelph Winter Fair, and expressed my belief that a duty on raw wool would be a bad thing for the woollen manufacturers, and a bad thing for the wool-grower too, but since then I have studied the history of the tariff legislation in other lands affecting the wool industry, and I have become convinced that I was mistaken. I explained the grounds of my belief to the Finance Minister about the time a deputation of the woollen section of the Canadian Manufacturers' Association waited on him for an increase of duties on woollen fabrics, and some members of that body accused me of being the cause of their failure with the Government, because I advocated protection to the farmer on his wool. Up to that time the woollen section of that body had never proposed protection to the Canadian wool-grower. I am not now and never have been a member of the C. M. A.

With this explanation, I invite the readers of "The Farmer's Advocate" to sit down and consider a few fundamental facts.

The net revenue of the Dominion for the past fiscal year was, in round figures, \$100,000,000. Of this about \$8,000,000 was obtained from the postal service; \$15,000,000 from excise duties on spirits, tobacco, etc.; over \$17,000,000 from other miscellaneous sources, and \$60,000,000 from duties on imports. That is to say, three-fifths of all the country's income is derived from the tariff. Is there any alternative method of raising this sixty millions except by direct taxation? If the answer is no, then let us ask: Has any political party possessing the ear of the country proposed direct taxation, and have the Canadian farmers, or commercial classes, or industrial classes, expressed a general wish to pay direct taxes and do away with the custom houses? We know they have not.

Is it practical, then, to talk of doing away with the tariff when no responsible party has the least intention of levying direct taxation to take its place? There are those who recognize this situation, but think the tariff may be reduced. Is this likely? Every new administration that comes into power pledges itself to the utmost economy, but for the last forty years the cost of conducting the country's business has steadily risen, and reasoning from the past, will continue to rise. Some of our administrators do their utmost to keep down expenses, but in a growing country, with multiplying needs, these expenses are more likely to increase than to diminish.

If the economic situation is here stated as it really is, and not according to the visions of some who long for the ideal, then we are destined to suffer (or enjoy) a tariff. We are the less likely to escape from this, because we are placed alongside of an aggressive, alert people, keen to add to their already vast wealth, who also have a tariff, and that tariff twice as high as ours.

What effect has this inequality of tariffs on trade between the two countries? In my former letter I showed how trade in farm produce had swung against the Canadian farmer between 1886 and 1908. If we carry the results down to 1909 the situation between the farmers of the two countries is brought into still more striking contrast. To make it clear, I give the figures in graphic form as follows:—

Canadian exports of Farm Products to U.S. 1886	\$32,772,000
Canadian exports Farm Products to U.S. 1909	\$46,473,000
U.S. exports of Farm Products to Canada 1886	\$6,259,000
U.S. exports of Farm Products to Canada 1909	\$32,566,000

In each case these totals include raw farm products, such as grain, live stock, etc., and manufactures made directly from those products, such, for instance, as bacon, hams, preserved meats, cereal foods, etc. Thus we find that within a quarter of a century Canadian farmers have lost in the United States market a trade amounting to \$26,299,000 annually, while U. S. farmers have displaced the products of the Canadian farmers in this market to the extent of \$26,267,000—the two positions being now almost exactly reversed. If this turning of the tables was caused by a shift of one or two big items we might not attach much importance to it, but there is no

group of items in the whole list in which the Canadian farmer has not lost and U. S. farmer gained. The details may be obtained from the Trade and Navigation returns. Some of these imports will be re-exported from each country, but that will not alter the general situation.

In studying such a result can we assert that a high tariff invariably raises the price of goods to the consumer within the protected area? If this were inevitable, then the farmer in Canada, with a tariff scarcely more than half as high as that which protects the U. S. farmer, and about one-third of that protecting most classes of U. S. manufactures, would have been able to produce so much more cheaply than the U. S. farmer that he would have no difficulty in holding the large trade he once had in that country. But he has not only failed to maintain his hold on that market, but is being swamped on his own ground by his U. S. competitor producing under a high tariff. It is a fact more commonly known, but should be also noticed here, that in manufactures, as well as farm products, the U. S. is dominating Canada to a greater extent year by year; and yet on the theory that high tariff means high cost of production, Canadian manufacturers should be able to gain on U. S. manufacturers in neutral foreign markets, and British manufacturers should have eclipsed U. S. manufacturers all along the line in the Canadian market. But the U. S. manufacturer is making more rapid headway in this market than the British manufacturer, though the latter has one-third less duty to pay.

Our relationship to the U. S. may be likened to two settlements of people living on opposite sides of a river, and each owning half of a bridge, the sole means of traffic across the river. If the people on the south shore impose a charge of \$2 on each person who comes across to sell, while those on the north shore only charge \$1 to those who come across from the south, what will be the effect on the trading between them? Fortunately, Canada is not limited to trade with the United States, but the toll-bridge may be a useful illustration for those who think that any sort of reciprocity treaty with the U. S. must be of commercial benefit to Canada. If there is to be an unrestricted reciprocity treaty with the U. S. there must first be an equalization of tariffs, for the plain reason that, with a Canadian tariff so much below that of our neighbors, if trade is unrestricted between us the imports to the American continent would come through Canadian cities because of the lesser duties, and New York, Boston, Philadelphia, San Francisco, etc., would lose their over-seas commerce. Are American financial and commercial interests likely to allow Montreal to be built up at the cost of New York? On the other hand, if Canada hands over its fiscal independence into the keeping of the United States, the loss of her political independence will follow. All honor to those on both sides of the line who desire to see good-will increased between the two peoples, but let us not be blind as to the meaning of giving up control of our own fiscal policy.

Keeping to the tariff question, we cannot stop at the relations of farmer with farmer across the line. We have industrial and commercial communities on both sides, and it is time that the Canadian farmer realized which is the big end of his business. I suppose if any ten farmers were asked which was the greater, the home market or the foreign market for wheat, for example, perhaps nine out of the ten would answer, the foreign. Yet, according to the last census of 1901, and the trade returns of the following year, the consumption of wheat in Canada was two and a half times the amount exported. For every bushel of barley which foreigners took Canadian consumers took thirty-four bushels. Fifty bushels of potatoes were consumed at home for every one sent abroad; twenty tons of hay taken at home to one ton shipped out of the country; and in apples, 31 barrels were eaten at home to one abroad. There was not a single item of importance raised by the Canadian farmer in which the home market was not greater than the foreign. Now, if this was the case with the half-developed manufactures we have, would the home market not be of still greater proportions if we had more manufactures and more internal commerce? Yet the Canadian farmer has been taught to look upon the manufacturer as his natural and only enemy, and concentrates his desires on the one barrel of apples to the entire forgetfulness of the thirty-one. It seems reasonable that if protection is good for a man who works in a factory it is also good for the man who works in the field. Since the home market—especially in perishable farm stuff—is to be preferred to the foreign market, and since it is also greater in volume as shown, why should the farmers be at war with their own largest customers? I am not advocating a protective tariff as an end in itself, for the ideal system is one in which commerce shall be free and the costs of administration raised by direct taxation, but that result will be reached through the mutual conflict of tariffs among the nations, and not by an early adoption of free trade. There does not seem in Canada—and certainly not in the U. S.—any such general conviction.

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tion of the advantage of free trade that people are willing to come out and show their desire to pay taxes and raze the custom houses. Suppose that step were taken? The first result would be that many millions of capital would be wiped out and a million hands would be out of employment. The country could recover from this financial and industrial convulsion, and the outcome might be an ultimate improvement if all the people turned loose from the factory went to Canadian farms. But would these factory hands go to the farm? Some would, but inasmuch as a large proportion of these city people deliberately left the farm and preferred factory life, would they not follow their preferences still, and if so, would they not go to swell the cities of the U. S., where hundreds of thousands of them went in years gone by when the industrial expansion and high wages followed the high tariff of 1866 and following years in that country? In making these reflections, I am trying to see things as they are, and to show what is involved in doing away with the tariff. We are now a modern nation, with a complex life, comprising the interests of the farm, the forest, the fisheries, the mines, manufactures, and last, but perhaps most powerful, the financial and transportation interests. Are those who have put their money in mines, manufactures, banks, loan companies or railways likely to invite the chaos to their business involved in the abandonment of the tariff? And since the home market is greater than the foreign in farm produce, is the Canadian farmer himself so sure of his ground as to throw away the greater for the less, with the certainty that he can recover abroad what he loses at home?

With this attempt to clear the ground, I will in another letter take up the wool problem.

Toronto. E. B. BIGGAR.

HORSES.

Mare and Foal at Weaning Time.

When a foal is five months old it is time that it should be weaned. In this process there are two methods of procedure—one the gradual taking away of the foal, and the other the abrupt. In gradually weaning the colt, it is separated from its dam and allowed to suckle only at stated intervals. Usually it is allowed to nurse at first three times a day; after three or four days this is reduced to twice a day; later one nursing a day is all that is allowed, and finally it is entirely separated. This method is followed because the mare is thus gradually dried off, and because the change of diet for the colt is thus less abruptly made.

Where the colt is younger than usual at weaning time, and has not been accustomed to solid foods, or where the mare has not been working and is an unusually nervous and heavy-milking mare, there is some argument in favor of the system. Usually amongst economic farmers the brood mare has been doing her share of the work during the last three months. In such a case there is little or no tendency to excessive milk supply; the colt has likely learned to eat grains and hays, and has been accustomed to about only three nursings a day. Even where the mare has not been working, it is questionable if this gradual process of weaning is to be preferred, unless the colt has not learned to eat anything but grass previous to weaning time; in that case the first thing to do is to teach the colt to eat. That done, then wean him. Gradual weaning keeps up the memory of the one for the other, and both mare and colt will fret. In general practice the abrupt weaning will be found most satisfactory. The grain ration of the mare should be cut down, and some of the milk should be drawn from her udder three or four times a day, gradually decreasing the number of times and the quantity until the flow ceases entirely. The mare, if she has been at work, will be best if worked right along. If she is not at work, cut out the grain ration entirely, and feed only hay, keeping her off pasture or upon a sparse pasture until the milk flow ceases.

The foal requires to be kept well away from and if possible out of hearing distance of the mare during the first week. It will do best if it has the companionship of another weanling or a yearling. Colts do not enjoy being left alone. Preferably keep the colt in the stable, where it is cool, protected from flies, has plenty of water and good feed during the weaning process. At the end of a week or ten days it may go to pasture with the other young horses, but must not be any the less regularly and carefully fed. For a six-months-old colt cannot do justice to itself or its owner grazing at any season of the year, but especially when flies are bad and grass is scant.

Money in Horses.

For the average farmer there is little doubt but that the general plan of mixed or diversified farming is most advantageous. There is safety in not having all one's eggs in one basket; then, too, the fertility, cleanness and productivity of the farm are more likely to be maintained at a higher level; there is a better use made of all the products and a fuller utilization of time. Our chief trouble is that we think we are diversifying when we are not. In proof of it, count the number of farmers who have no hogs, or but scarce a handful; the few who have even a half dozen sheep on their farm, and the many who are not raising a colt this year. It is not simply a diversity of crops that is needed, but a diversity of live stock. All lines pay, and pay well, and a strength and breadth comes from producing the different kinds that the producer of one kind does not experience.

The dairy cow has proven a profitable animal to most farmers, though she can be made much more so, but the other branches of live stock have not generally been considered safely remunerative, while in truth with attention they are. Horses will pay their way handsomely if a man will plan to make the most out of them. A man of experience in raising them says: "I must have horses to work, and a good pair of draft mares will do just as much work as a pair of geldings or mules, and raise a pair of colts besides. Of course we cannot all have good luck, but the more that have poor luck the better for the rest of us. I consider that a good draft horse raised on my farm costs me practically nothing when he is four years old. His manure is almost worth the feed he consumes, and he will pay for his keep in work after he is thirty months old. Any up-to-date

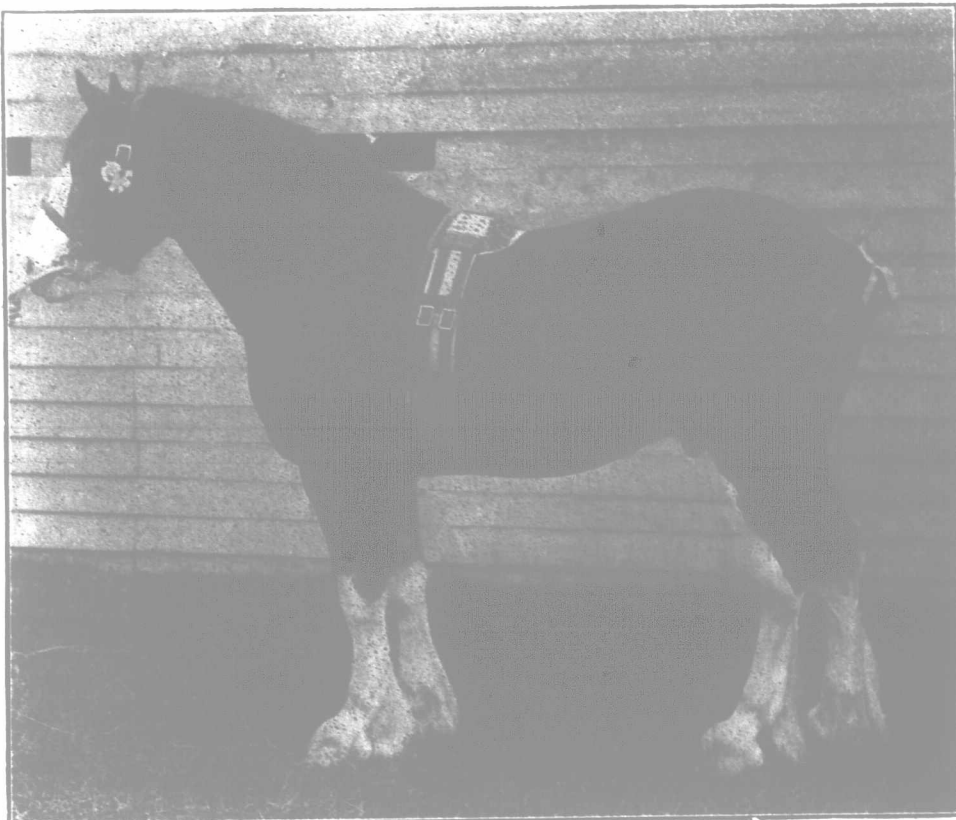
LIVE STOCK.

Value of Pedigree Stock.

Pedigree stock comes to be looked upon as public property, in so far as it may be said to be open to inspection at all times by breeders and purchasers, seeing that it is in the interest of owners to afford every reasonable facility for such inspection. The fact that visitors may turn up at any time, leads, writes Mr. Robert Bruce, in the Live-stock Journal Summer Number, "in the majority of cases, to improvement in the management of land, more attention to cleanliness, and a general smartening up in the appearance of the roads, buildings, etc., and the manner in which the animals are handled and kept." Another and doubtless a more important benefit derived from the ownership of a pedigree herd, is the development of a feeling of brotherhood which exists among breeders, with all its consequent advantages. Too much cannot be said on this subject, as breeders have only to become members of such a brotherhood to feel that they possess corners needed to be rubbed off, views expanded, and, altogether, an extended and more lenient appreciation regarding the opinions of others. This is no imaginary statement, but one which is made after a lengthened experience amongst breeders of many different herds of stock.

Selecting the Ram.

Mating season for sheep is fast approaching; in fact, for some lines of lamb production, is already here, but, for the general farmer, the season is still some few weeks hence. However, new stock rams, if not already purchased, must be obtained in the next few weeks. Since the future of the flock depends almost entirely upon the sire, too much care cannot be taken in his selection, and a few suggestions on so important a subject may be of much value at this time. Many men have their breed preferences; those who have, should study well the characteristics of that breed, and get the very best representative of it available when buying. Others have no marked preference. With these, the conditions will determine largely what breed to select. In most of Canada hardy sheep are required. Those that are active, vigorous, with strong vitality and well woolled. The Lincolns, Leicesters, Cotswolds and Oxfords, all being large, call for luxuriant pasturage and



Baron Ashvale (14579). Clydesdale stallion; brown; foaled 1907. Champion, Highland Societies' Show, 1910. Sire Rozelle, by Baron's Pride; dam by Hiawatha.

farmer will tell you that there is more clear money in raising good colts on the farm than anything else he can do. Pretty good proof of this is that over 90 per cent. of them are trying it. Of course a man should like a horse or he should not have it; but this is true with young stock of any kind."

Without doubt there is much truth in what he says. By careful management a half dozen good brood mares on a two-hundred-acre farm, being carefully managed and attention being given to their colts, will rival the average-sized group of dairy cows in net returns, require less constant attention in the doing of it, and give as great if not greater pleasure.

Hereditary tendency to disease may be strongly or slightly inherited. In some families particular weaknesses appear in every member at one period or another. In others they appear only occasionally, or may even altogether disappear. The influence of external circumstances may do much to uphold health and ward off disease where the tendency to it is only feebly inherited, and even in some cases permanently stamp out the morbid faculty altogether. In this connection, good food, a suitable climate, and the general observance of the laws of health, are the essential elements of success. With regard to the powers of endurance possessed by some horses, and the tolerance of cold and deprivation exhibited by many, these properties are built up in the constitution and handed down from parent to progeny.—[Exchange.

plenty of feed; the Shropshires, Hampshires, South-downs and Dorsets, though of good size, are all smaller breeds that are more active, thriving in sparser pastures, and withstanding less favorable conditions. However, all do best with plenty of food. It is a good rule to select that breed which has been tried and has done well in your community, though the various breeds are quite adaptable within certain limits. Each man must decide for himself which breed he shall use.

Having settled the breed and mastered its characteristics, the points of the individual must be closely observed. One should select, always, a well woolled animal—one whose fleece presents a dense, compact, fine covering all over the body, and of good length, considering the season. Openness of fleece, or bareness on the belly, too strongly indicate inability to withstand rigorous weather. The plentiful covering of wool bespeaks vigor in the animal.

One of the first things that impresses a buyer in looking at a ram is his sexual development, the promise of his impressiveness as a sire. A ram should not resemble a ewe any more than a ewe should appear like a ram. This quality of masculinity is everywhere apparent in the animal. It shows in the bold, fearless expression of the eye—that afraid-of-nothing expression; it shows in his strong walk, in his carriage and manner, but most, perhaps, it shows in the strong, scraggy neck and the strength of face. If these things are not apparent in a ram, the buyer may well pass him by. In a weanling, of course, these characters are not pronounced, but in the shear-

ling they should be there, and in the two-shear or older rams they are still more pronounced.

If a ram pleases in these respects, the buyer may then pass on to a more discriminating examination. Carefully the mutton form must be sought for; the broad, smooth, compact shoulders, level on top, well laid-in on the sides; strength of back; wide-sprung ribs; covering of meat, depth of chest; depth of flank; depth of twist; the full, meaty leg of mutton; and the broad, even rump. The buyer must remember that he is looking for a sire for his lamb crop and his improved ewes. He must not let a well-trimmed fleece deceive him, nor a covering of fat. There should be no blubber about the tail-head, nor on the ribs.

Then, too, the fleece is important. Already, notice has been taken of it; again it should be examined as to denseness, purity, fineness and evenness. That constitution sought for must be indicated in a deep chest, obtaining vital capacity by well-sprung ribs, a wide floor of chest, and a thickness through at the elbows; a clear eye, a clean nose, and a healthy skin, are other evidences of health.

The scrotum should always be examined. The feet and pasterns are of greatest importance. Many an otherwise good ram has been ignored, rightly, in a show-ring because his pasterns were so broken down behind that he stood on his dew-claws. Such a ram cannot be depended upon to serve a flock of ewes successfully, and his progeny will be liable to the same defect. Therefore, the buyer must beware of weak pasterns, and avoid the ram that stands on them.

There are many other factors, such as size, proportion, quality, that one must always watch, but most of the main points to be pondered on are as here given.

Honor Roll of Shorthorns.—IX.

By J. C. Snell.

In 1896, at Toronto, J. & W. Russell's white bull, Lord Stanley (the junior champion at the Columbian), now in his five-year-old form, was first in the aged class, but was beaten in the contest for the championship by Moneyfuffel Lad, in his two-year-old shape, shown by James Leask, he having been the sweepstakes bull of the previous year. Harry Smith's Abbotsford was first in the three-year-old class this year, with Captain Robson's Nominee second. R. & S. Nicholson's Indian Brave, bred by David Birrell, of Greenwood, and sired by Indian Chief, was a strong second to Moneyfuffel Lad in the two-year-old section; and John Davidson, of Ashburn, had a worthy winner in the yearling class in his red and white Duke, by Scottish Prince. The champion female here in 1896 was the first-prize yearling, Coral, a charming red heifer, a clear first in her class. She was bred by John Miller, Markham, sired by his bull, Aberdeen, and shown by J. & W. Russell, who bought her from Arthur Johnston, in whose hands she was fitted for the show.

In 1897, with John T. Gibson and Ed. Jeffs as judges, the first place in the aged-bull section at Toronto was allotted to Captain Robson's Nominee, a roan four-year-old son of Earl of Moray, second being Harry Smith's Abbotsford, third the Duthie-bred Prime Minister.

In the three-year-old section, Moneyfuffel Lad, shown by James Leask, was the winner; strong competitors being A. W. Smith's Caithness, and Nicholson's Indian Brave, by Indian Chief, which were placed in the order named. Messrs. Watts' roan yearling, Judge, by Royal Sailor, was first in his class, and the championship went to Nominee, who was in fine condition, smooth, straight and level; the reserve being Moneyfuffel Lad. The champion female this year was the white two-year-old heifer, Mysie's Rose, a very perfect number, bred and shown by Captain Robson, sired by Royal Chief, a roan son of Imp. Indian Chief, and bred by Arthur Johnston.

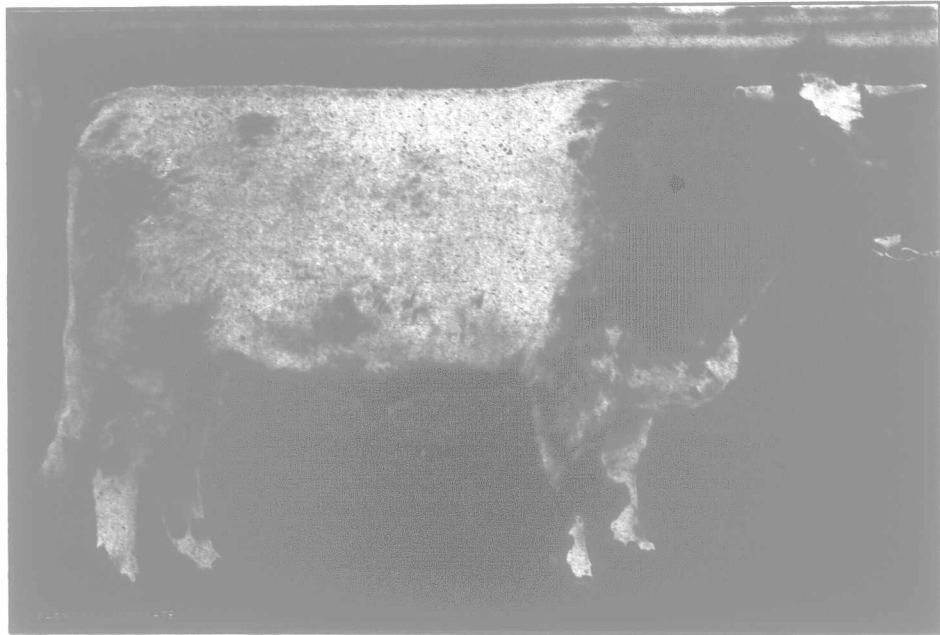
In 1898 Moneyfuffel Lad, in his four-year-old form, shown by Captain Robson, again came to the front as champion at Toronto, winning that honor for the third time out of four contests, a record we do not recall having seen excelled by another bull in this country. Nominee had in the meantime, since the show of ninety-seven, been sold to H. F. Brown, of Minnesota, who showed him with great success in the States, defeating amongst others his great Canadian-bred but American-raised confrere, St. Valentine, the champion of the West the previous year. Shorthorn connoisseurs who saw Moneyfuffel Lad as a yearling when he won the championship at Toronto, were agreed that a better bull of his age had never before been seen in this country, and the same opinion prevailed when he came out as a four-year-old in blooming condition, his many high-class qualities showing to best advantage.



A. W. Smith, M.P.

Captain Robson's Mysie's Rose, first in the three-year-old section, repeated her record of the previous year, by again carrying off the female championship decoration, a phenomenal record for the Captain and his erstwhile Lieutenant, Harry Coltham, the skillful feeder and fitter, but the end was not yet.

In 1899, at Toronto, in the aged-bull class,



Moneyfuffel Lad.

with James Smith and Wm. Linton as judges, were Capt. Robson's red seven-year-old Topsman, by Stanley, making his first bow to an Ontario show-ring audience; Russell's eight-year-old roan, Duncan Stanley, by the same sire, and Harry Smith's roan, Abbotsford; a very strong trio.



The Late James I. Davidson.

which were placed in the order above named. Jas. I. Davidson & Sons showed an excellent red and white three-year-old, Sittyton Hero, which won first in his class. He was an impressive sire as well as a strong show bull.

The contest for first honors in the two-year-old section was between Capt. Robson's George Bruce, a roan, by Robert the Bruce, and Senator Edwards' roan, Marquis of Zenda (imp.), by Wanderer; these being placed by the judges in the order named, though not without criticism. They were both good bulls, but each had a back that might have been stronger. We find no record of the fate of George, but the Marquis proved a very successful sire, many of his progeny being high-class prizewinners in recent years, and so far as we know, he is still doing business at the old stand. Two excellent roan sons of Judge, both bred by Watt Bros., namely, Leask's Royal Banner and Nicholson's Royal Standard, were the winners in the yearling class, in the order named. In a class of 25 bull calves under a year, the white, First Choice, shown by Messrs. Watt, a son of Judge, was placed first. The male championship worthily went to Topsman, and the female championship to Messrs. Watt's handsome red three-year-old, Matchless 18th, by Royal Sailor.

In 1900, owing to an unusually large number of prizewinning animals having been sold to go to the States, the exhibit, on the whole, at Toronto in the older sections was hardly up to the usual standard, yet the best in nearly every class were of high-class quality. In the aged-bull section Charles Dickens, a red and white four-year-old son of Imp. Royal Sailor, shown by J. & W. B. Watt, was the winner, with Russell's Duncan Stanley second, and Wm. Grainger & Sons' Beau Ideal, by Imp. Sittyton Stamp, third. In the two-year-old class, J. & P. Crerar had the winner in the red Imp. Captain Mayfly, by Captain of the Guard; while in yearlings the white, First Choice, bred by the Watts, and shown by Capt. Robson,

was placed first, without general approval, over Joy of Morning—32070—, a roan son of Pride of Morning, bred by Wm. Duthie, Collynie, imported and shown by James A. Cochrane, Hillhurst, Quebec. This was a bull of uncommon character and quality, which later on won first award in the aged class at the Dominion Exhibition in Toronto in 1903. The giving of first place to First Choice in his class virtually settled the male championship of 1900, which went to him the same day. An extra smooth and substantial cow was Russell's red Nonpareil 52nd, by Stanley, which captured the championship. She was in the young herd, under two years, that won the \$600 prize at Chicago in 1893, and at maturity she had great depth of body and superior symmetry, and was a very worthy daughter of her great breeding sire.

(To be continued.)

Brandon Exhibition.

The Inter-Provincial Exhibition at Brandon, Manitoba, July 25th to 29th, eclipsed all previous events of its kind in that district of the West, in the number and quality of exhibits, while the attendance was good.

HORSES.

Entries of heavy horses numbered 443, and light horses 173. In the aged Clydesdale stallion class the winner was Cowden's Prince, by Lothian Again, shown by W. Elder, Brandon. He was the champion at the Western Fair at London last year, in the hands of Graham-Renfrew Co. P. M. Brett & Sons were second, with Trojan, and Vanstone & Rogers third, with Pundit. Three-year-olds: Vanstone & Rogers first with Bamboo; W. Hassard second with Fortune's Pride, and John Graham third with Marscarille. Two-year-olds: First, Brett & Sons, with Baron of Edenwold; second, J. Crawford, with Baron Masher; third, W. J. McCallum, Brampton, Ont., with a son of Baron of Buchlyvie. Cowden's Prince was the champion stallion, and Sir Wm. Van Horne's Princess Royal was the champion mare.

The Percheron champion stallion was Colquhoun & Beattie's Harponneur, and the champion mare, D. McCallum's Mignogen.

The champion Shire stallion was J. Stott's Handsome Prince, the first-prize aged stallion, and the same exhibitor had the champion mare.

The heavy horses were judged by Prof. W. B. Richards and Andrew Graham, Pomeroy. Charles Brothers, Stratford, Ont., judged the light classes.

CATTLE.

Most of the cattle classes were well filled. The herds shown at Winnipeg, with the exception of the Minnesota contingent, were present at Brandon. W. A. Dryden, Brooklin, Ont., judged the Shorthorns. In the aged-bull section, J. G. Barron's

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two-year-old George Bruce, and Senator Ed- (mp.), by Wan- judges in the criticism. They and a back that no record of proved a very ny being high- and so far as s at the old of Judge, both s Royal Banner re the winners named. In a ar, the white, tt, a son of e championship e female cham- me red three- Sailor.

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Mistletoe Eclipse was again the winner. In two-year-olds, H. L. Emmert's Oakland Star won first award. In senior yearlings, W. H. English had the winner in Lancaster Lad; and in the junior section, Sir Wm. Van Horne's Imp. Boquhan Hero was first. The senior champion and grand champion was Emmert's Oakland Star, and the junior champion was Boquhan Hero. The awards in the aged-cow class were the same as at Winnipeg; Van Horne's Mina Princess and Spicy's Lady being first and second. Emmert's two-year-old heifer was again first, with Van Horne's Spicy's Rose second. The same exhibitor had all three winners in the senior-yearling class, and in the junior section Barron was first with his Blossom. The senior champion and grand champion female was Emmert's Susan Cumberland, and the junior champion was Van Horne's Spicy Lady 2nd. The herd prizes, bull and four females, were awarded, first to Van Horne, second to Emmert, third to Brett & Sons. For young herd it was: 1, Van Horne; 2, Barron; 3, R. W. Caswell.

Herefords were well shown by five exhibitors. William Shields, of Brandon, was the largest exhibitor, and won nearly all the first prizes, and all the champion and first herd prizes.

Aberdeen-Angus were represented by the herds of J. D. McGregor, of Brandon, and James Bowman, of Guelph. The former being at home had the advantage in bringing out his stock, and got the majority of first prizes, the Guelph herd winning in two-year-old and senior yearling bulls.

The dairy breeds were judged by James Glennie, of Macdonald, Man.

Ayrshires were, as at Winnipeg, shown by A. H. Trimble and J. M. Bruce, the latter winning in all the bull sections and aged cows, and Trimble in the female sections except two-year-old heifers. The aged and young herd first prizes went to Trimble.

Holsteins were exhibited by H. Hancox and A. B. Potter, the latter winning in the sections for aged bull, two-year-old bull, bull calf, two-year-old heifer and senior herd; while Hancox had first with bull calf, yearling heifer, young herd, and the progeny of one sire.

Jerseys from the herds of B. H. Bull & Son, Brampton, Ont., and J. Harper & Sons, Kinley, Sask., made a strong show; the Brampton herd winning the lion's share of the first prizes, including first for aged bull, with Brampton's King Edward; first for two-year-old bull and bull calf; the championship for the best bull with King Edward; first for heifer two-year-old, and heifer calves, senior and junior; the female championship, with the two-year-old, Rochette's Golden Beauty, and the first herd prize for a bull and three females. Harper & Sons had first for yearling bull, aged cow, with Bet's Wanders; first on yearling heifer.

A Champion Herdsman.

High on the honor roll of herdsmen in Canada stands the name of Henry Coltham (Harry, for short), at present in charge of the Shorthorn herd of W. A. Dryden, at Maple Shade Farm, Brooklin, Ontario. Born at Elham, Kent, England, February 26th, 1844, he was apprenticed to farm work at the age of 14 years. His manifest interest in good stock soon won for him a place as assistant, and later a full-fledged herdsman. Coming to Canada in 1882, he was favorably impressed with the lay of the land in the riding of South Ontario, and stepped off the train at Whitby Station, where he found work with Jerry Lick, near that town. In the meantime, making inquiry for stockmen, he engaged with William Miller, of Pickering Township, where he remained for a year, when he was captured by a breeder from Illinois, who imported him to that State; but he was too true a Briton to be long content to live in a foreign land, and a year later accepted a call from Arthur Johnston, of Greenwood, Ont., to take charge of his herd, where, for six years, in the nineties, he developed the progeny of the noted sire, Imp. Indian Chief, making a mint of money for his employer.

After a lapse of a year with W. S. Lister, at Middlechurch, Manitoba, he was recalled to the Greenwood herd, where he served two more years, when he engaged with Capt. T. E. Robson, of Alderton, in charge of whose herd he remained

12 years, and where he made the most of his high-notch record in bringing out such notable National champion bulls as Nominee, Topsman, Money-fuffel Lad, First Choice, Valiant and Prince Sunbeam, and such females as Mysie's Rose, Louan of Browndale 2nd, Lovely Lorne, Jubilee Queen, Topsman's Queen, and Queen of the Louans. Coltham seemed to have no compunctions of conscience as he stood in the show-ring year after year scooping the best things in the prize list, and more than once capturing the first herd prize and the male and female championships, without turning a hair. His face was a study as he stood in the show-ring, at the head of a Shorthorn, paying attention only to the position and pose of his

the same sale for \$3,050. With apologies to the author, the scribe in this case is tempted to close this scrawl by adapting the lines that were written in honor of a noted English herdsman:

"He whom the gods call Coltham,
And men on earth call Harry."

THE FARM.

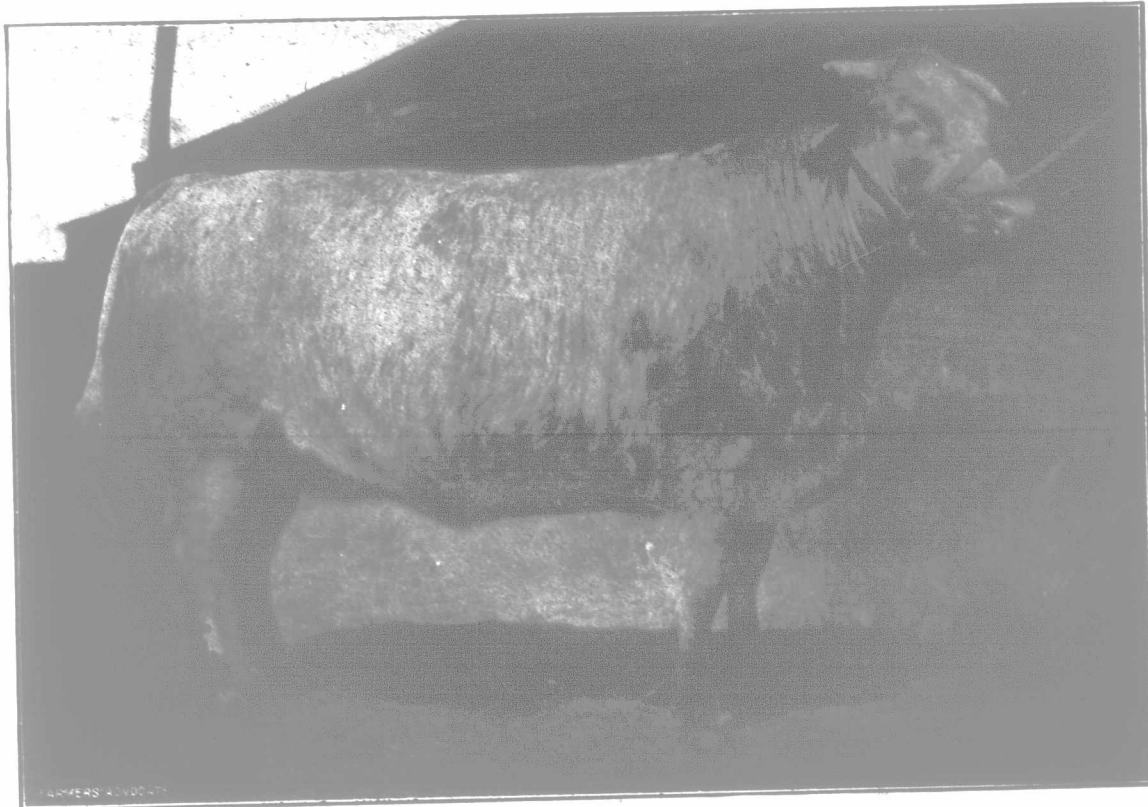
Cost of Production on Farms.

The cost of living has advanced considerably the last good many years, both in Canada and the United States, though probably more in the latter than the former country. It has grown to such proportions in the Republic as to have called for the appointment of a special committee of the Senate to search after the reasons. One of the most interesting and educative testaments given before that committee was presented by Thomas P. Cooper, of the Minnesota Experiment Station, whose evidence consisted of deductions based upon the tabulated results of about eight years of hard investigational work, and at every point bore the earmarks of accuracy. The facts are presented to our readers for their perusal. Minnesota conditions do not vary so widely from many parts of Canada but that the general applications are of the greatest value. From the facts presented, it is clear that Minnesota farmers particularly, and all farmers generally, are not responsible for the great increases in the cost of living

For a number of years the Minnesota Agricultural College, in co-operation with the United States Department of Agriculture, has been conducting an investigation to discover, if possible, the cost of producing all kinds of farm products. This investigation was started in three different sections of the State, one of them being the north-western part of the State, near Halstead, in the Red River Valley, the famous grain-growing section; another was near Marshall, in the south-western part of the State, covering the diversified farming district, and representing a transition from grain-growing to stock-raising; the third was in the south-eastern part of the State, near Northfield, where they were carrying on the highest type of agriculture in Minnesota. This work was started in 1902 by W. M. Hayes, now Assistant Secretary of Agriculture, and since that time it has been carried on by Thomas B. Cooper, who is in charge of the work for the Minnesota Experiment Station.

In order to get accurate results, there were established "statistical routes" at each of these places, and from eight to ten farmers were asked to co-operate with the Station. A route statistician was stationed on each of these statistical routes, and was required to visit each farmer daily, obtaining from him the hours of labor performed on each crop and enterprise on the farm, and the receipts and expenditures from the farm. In addition, all feeds fed to live stock were carefully weighed, and their gains or the products were recorded, so that a complete statement as to profits or losses of the farm, and the cost of production of every product could be presented. During the recent hearing of the select committee of the Senate to investigate the cost of living, Mr. Cooper presented a great mass of figures pertaining to this subject, which are particularly interesting and valuable to all farmers.

The Increase in the Cost of Man Labor.—At Northfield, the cost per hour (including cost of board) for man labor, averaged by the year, was 11.3 cents in 1905, and 14.4 cents in 1909, an increase of 27.6 per cent. At Marshall, 12.2 cents in 1905, and 14.5 cents in 1909, an increase of 18.8 per cent.; at Halstad, 11.9 cents in 1905, and 13.5 cents in 1909, an increase of 13.8 per cent. The average cost of labor per month, exclusive of board, ranged from \$10 to \$15 during the winter season; during the crop season it averaged \$24 to \$26 in 1905, \$28 to \$33 in 1909, and \$35 in 1910. The cost of board on the three routes has increased in this way: At Northfield, from \$11.18 per month in 1905 to \$14.93 in 1909, an increase of 33.5 per cent.; at Marshall, \$11.89 in 1905 to \$13.57 in 1909, an increase of 12 per cent.; at Halstad, \$10.74 in 1905 to \$11.21 in 1909, an increase of 4.4 per cent. In this con-

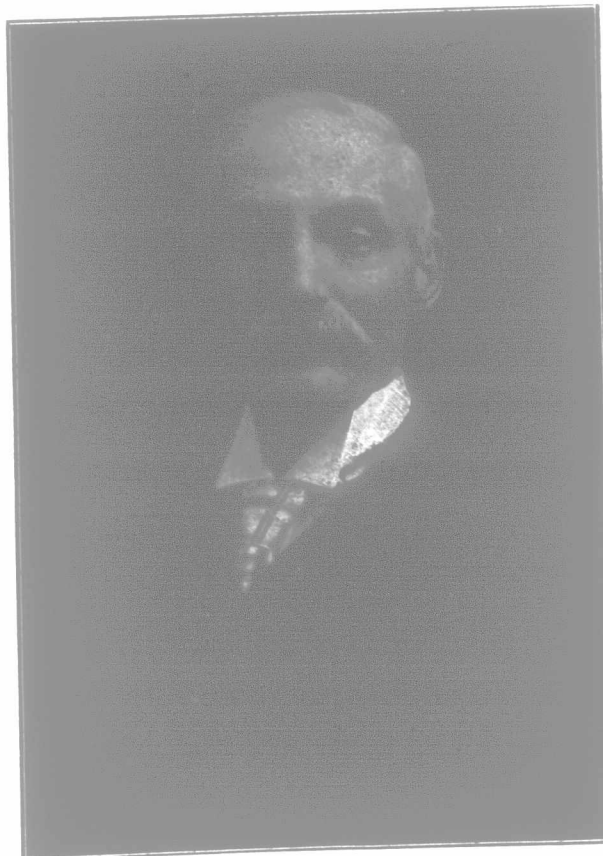


Susan Cumberland.

Two-year-old Shorthorn heifer. First and champion female, Winnipeg and Brandon, 1910. Exhibited by H. L. Emmert, East Selkirk, Manitoba.

charge, which was always at its best when the eye of the judge was turned his way.

Few men have figured more conspicuously at the Canadian National Exhibition in the last twenty years, and in the vicinity of the Shorthorn stables or show-ring it has hardly been necessary for visitors to inquire, "Has anybody here seen Coltham," since he has seldom failed to be in the limelight on such occasions. We have written of him as in the past tense, but he is by no means a "has been," but is in the living present, hale and hearty, and only last year, as has been his custom, he carried out the grand championship ribbon at Toronto for the best Shorthorn bull in the show with Mr. Dryden's Prince Imperial, sold at Aurora, Illinois, last winter at auction for \$10,000, and was feeder of Woodfield Lady, sold at



Henry Coltham.

nection it will be noted that the cost of board has increased much more rapidly at Northfield than at Halstad, due to the fact that at Northfield a much larger proportion of the cost of board has been made up of supplies that have been purchased as groceries and fuel, it being located nearer to the large cities.

Increase in Cost of Horse Labor and Farm Machinery.—The cost of horse labor was established from the basis of cost of maintenance. At Northfield, the average cost of horse labor per hour was 8.5 cents in 1905, and 9.6 cents in 1909; at Marshall, 8 cents in 1905, and 9.9 cents in 1909; at Halstad, 7.5 cents in 1905, and 8.7 cents in 1909. The figures fluctuated somewhat between these dates, but a general increase was shown. The cost for other supplies, such as machinery and various farm utensils, have increased proportionately. An accurate statement on this subject is not available, but the increase was probably somewhere between 10 and 20 per cent. between 1902 and 1909.

Hours of Man and Horse Labor Required in the Production of Corn and Wheat.—The cost of production of farm products has been slightly affected by an increase in the hours of labor required, showing that the labor efficiency has been slightly decreased. During the five-year period, it has required about one hour more of man labor to the corresponding amount of horse labor to produce an acre of either wheat or corn, due to the fact that, as the supply of labor has increased it has become more difficult to get as much work out of the men. The production of one acre of corn at Northfield required 29.6 hours of man labor and 47.9 hours of horse labor in 1906; 28 hours of man labor and 45.8 hours of horse labor in 1909. At Marshall, it required 20.9 hours of man labor and 42.5 hours of horse labor in 1906; 21.3 hours of man labor and 48.1 hours of horse labor in 1909. At Halstad, it required 25.4 hours of man labor and 38 hours of horse labor in 1909. The production of one acre of spring wheat at Northfield required 17.9 hours of man labor and 27.4 hours of horse labor in 1906; 18.2 hours of man labor and 25.1 hours of horse labor in 1909. At Marshall, it required 13.2 hours of man labor and 26.1 hours of horse labor in 1906; 11.4 hours of man labor and 26.2 hours of horse labor in 1909. At Halstad, it required 10.7 hours of man labor and 24.2 hours of horse labor in 1906; 11.3 hours of man labor and 22.8 hours of horse labor in 1909.

Cost of Production per Acre of Staple Farm Crops.—In this calculation eight years were divided into three periods, to eliminate any violent fluctuations that would be caused by any one year: the first period, 1902, 1903 and 1904; the second period, 1905, 1906 and 1907; the third period, 1908 and 1909. **Wheat**—The cost of production per acre increased at Halstad from \$6.92 to \$8.82, or 27.4 per cent.; at Marshall, from \$8.54 to \$11.35, or 32.9 per cent.; at Northfield, from \$10.86 to \$13.05, or 20.1 per cent.—an increase on all farms of 26.2 per cent. **Oats**—At Halstad, from \$6.97 to \$8.59, or 23.2 per cent.; at Marshall, from \$9.48 to \$11.33, or 19.5 per cent.; at Northfield, from \$10.68 to \$11.75, or 10 per cent.—an increase on all farms of 18.7 per cent. **Flax**—At Halstad, from \$7.53 to \$8.20, or 8.9 per cent.; at Marshall, from \$9.51 to \$11.91, or 25.2 per cent.; at Northfield, from \$10.68 to \$11.93, or 11.7 per cent.—an increase on all farms of 15.6 per cent. **Barley**—At Halstad, from \$7.07 to \$8.11, or 14.7 per cent.; at Marshall, from \$9.23 to \$9.87, or 6.9 per cent.; at Northfield, from \$9.99 to \$11.90, or 19.1 per cent.—an increase on all farms of 13.6 per cent. **Tame hay**—At Marshall, from \$5.48 to \$6.71, or 22.4 per cent.; at Northfield, from \$6.47 to \$9.30, or 43.7 per cent.—an increase on all farms, exclusive of Halstad, of 34 per cent. **Corn**—At Marshall, from \$10.46 to \$11.61, or 10.9 per cent.; at Northfield, from \$12.76 to \$14.66, or 14.9 per cent.—an increase on all farms, exclusive of Halstad, of 13.1 per cent. **Potatoes** increased from \$28.37 in 1907 to \$30.13 in 1909 in cost of production per acre, or 6.2 per cent. The items comprising the cost of crop production in these calculations were seed, twine, man and horse labor, machinery, marketing, miscellaneous items, and interest on the investment. The factors to which the increase in the cost of production are ascribed are: Increased cost of labor, increased cost of seed, and increased cost of various necessary supplies.

Cost of Production of Dairy Products—at Halstad, the cost of production of dairy products has not shown any violent fluctuations, increasing a little in the middle years of the period and decreasing again in 1909. This is due to the fact that Halstad is a long way from the central markets, that their cost of roughage is not greatly affected by the high prices which may have been paid in the cities, and also that they were feeding principally the farm grains which do not show as violent fluctuations as they have shown at Northfield, nearer to the city. At Halstad, the cost of production of 100 pounds of milk was \$1.24 in 1904, and \$1.21 in 1909; at Northfield, \$1.05 in 1905, and \$1.48 in 1909. At Halstad, the cost of production of one pound of butter-fat was 31.6 cents in 1904, and 31.1 cents in 1909; at Northfield, 28.4 cents in 1905, and 43.8 cents in 1909. The figures for Marshall show a decrease

from \$1.33 for milk in 1906 to \$1.25 in 1909, and from 34.7 cents for butter-fat in 1906 to 33.5 cents in 1909. To explain the exceptionally high cost of production for butter-fat at Northfield, it may be mentioned that they are selling whole milk principally to supply the markets of St. Paul and Minneapolis, and are maintaining more Holsteins than any other breed. These cows give a low percentage of butter-fat in milk, although heavy milk yielders, and consequently the cost of butter-fat is increased considerably above normal.

Increase in Average Annual Cost of Feed per Cow.—This includes cost of pasture, grains and roughage; in fact, everything that the cow receives. At Halstad, the cost of feed per cow for the year was \$17.12 in 1904, and \$24.69 in 1909; at Marshall, \$18.69 in 1906, and \$24.42 in 1909; at Northfield, \$22.84 in 1905, and \$26.30 in 1909. This shows an increase almost similar to the increase in cost of production of the product.

Average Annual Yield of Milk and Butter-fat per Cow.—At Northfield, the yield of whole milk per cow for the year was 4,875 pounds in 1905, and 5,121 pounds in 1909; butter-fat, 180 pounds in 1905, and 174 pounds in 1909. At Marshall, the average yield was 3,360 pounds of milk in 1906, and 4,516 pounds in 1909; butter-fat, 128 pounds in 1906, and 168 pounds in 1909. At Halstad, the average yield was 3,527 pounds of milk in 1904, and 4,975 pounds in 1909; butter-fat, 141 pounds in 1904, and 194 pounds in 1909.

Cost of Production of Other Farm Stock.—An accurate statement of this has not been provided, but in general it may be stated that the cost of pork at Northfield and Marshall from 1902 to 1907 was about 5 cents per pound. Since 1907 it has increased a great deal, owing to the increased cost of feed, and is now about 6½ cents a pound. The statement is made that the young stock on these farms, including calves, yearlings and two-year-olds, has been invariably produced at a loss. At Halstad, during the period of 1904 to 1909, the young stock showed an actual loss of \$1,845, and at Marshall the actual loss was \$133 between 1906 and 1909. These figures do not include the cost of shelter or interest upon the investment. According to this, the farmers would have saved money by killing off their young stock, as the cost of producing them to maturity was greater than the price received. At Northfield they raised pure-bred dairy stock, and have found ready sales for their young stock, which have resulted in a very small profit between 1905 and 1909. At Halstad, the cattle enterprise for all the farms during the years from 1905 to 1909 shows a net loss of \$7,573.97 on a total investment of \$19,753.70. At Marshall the same thing occurred, with a net loss of \$1,448.94 between the years of 1906 and 1909, on a total investment of \$12,835.50. At Northfield the cattle enterprise shows a gain of \$9,318.25 on a total investment of \$41,040.75, the gain being principally obtained during the past three years, when they have been able to get much higher prices for their pure-bred young stock.

All this investigation shows that the price the farmer has been receiving for his product has only within late years been sufficient to even cover cost of production, and to allow him to make any profit at all, or even a small profit. To account for the enormous increase in the retail price of the products of the farm, Mr. Cooper believes that the middlemen and retailers are taking a larger and larger slice of the legitimate profits. For instance, at Northfield, in 1905, the farmer received an average of 10 cents a gallon for milk, and it retailed in St. Paul and Minneapolis for 5 cents a quart. In 1909 the farmer received 12 cents a gallon, and it retailed at 7 cents a quart. Comparing this selling price with the cost of production, \$1.48 a hundredweight (about 50 quarts), it is seen that the farmer has not been receiving any more than enough to cover the actual cost of producing that product. On all the operations conducted on the various farms along the statistical routes it has been found that the total earnings on the investment have been 7.7 per cent. at Northfield, 6.6 per cent. at Marshall, and 10.8 per cent. at Halstad.

Will Education Pay a Farmer?

That depends whether the farmer is the kind of a man that can make good, practical use of his knowledge. It is with knowledge as it is with money. Some men can use it wisely, some can not or do not. Professor G. F. Warren, of Cornell College, states that he has the facts to show that ten college-bred farmers average \$847 yearly income, against an average of \$318 for farmers whose education had been limited to the district school.

But there is another side to this question. A farmer with a fair district-school education, if he has the mind for it, can in these days educate himself very fairly by the use of first-class dairy and farm papers and books, which will give him a scientific view of what he should do. In all the lines which lead out from the farm, the soil tillage, treatment of crops, breeding, feeding of farm animals, construction of farm buildings, and the thousand and one questions involved in good farming, close, studious reading and a disposition to

learn will carry a man far on the road to a wise understanding.

The greatest trouble is that too many farmers do not believe in these things, and will not invest a little money and time to comprehend them. They say: "I'll wait and see how the reading man does, and copy after him." Most farmers learn much more by what they see than by what they read. Consequently, they are about ten years behind, for it takes about that length of time to convince them.

Co-operation in Farming.

Undoubtedly co-operation has done much to make the Danish people the premier farmers of the world. Wherever co-operation has been undertaken and successfully carried on on this side of the Atlantic, it has been of undoubted benefit to the community undertaking the venture. It has blazed the way to a greater success and a higher life in other business pursuits; it has been greatly beneficial in the few farming countries where tried, undoubtedly it is the road we must travel to reach the goal sought by farmers. It is the method farmers must prepare to introduce, and those who do so first shall reap greatest benefit.

Henry Wallace, of Wallace's Farmer, is undoubtedly foremost amongst American farm economists. In a recent issue of that paper the frequent failure of co-operation is discussed as follows:

For the last year or two we have been making a somewhat careful study of the subject of co-operation among farmers, and have been taking particular notice of the few efforts that have proved to be eminently successful. We have concluded that there are several conditions without which any great degree of success cannot be obtained.

First in importance is business capacity in the management. The degree of business capacity required will depend upon the amount of business to be conducted; but whether that be large or small, the business capacity must be commensurate with the magnitude of the business. In California we found co-operative enterprises which paid five thousand dollars and over for the services of the principal executive officers. This, of course, was in the great fruit-growers' associations, where property to the extent of millions of dollars was handled. In Colorado we found a similar co-operative concern. We found also the same excellent and well-paid business capacity.

When it comes down to conducting farm operations, co-operators are not always willing to pay the market price for ability of this character. When the grange stores were established, in the seventies, farmers were willing to pay a good farm wage for a man to move to town and conduct the business, but they were unwilling to pay the salary which a man of like ability in town demanded for conducting a business of like magnitude. A thousand dollars a year then looked like a very large sum for the management of a grange store. The farmer, no matter how skillful he might be in swapping horses, in feeding cattle or selling them, undertook a new business when he attempted to manage a store, and generally failed. What these granges should have done was to have gone into the market and hired the best storekeeper that could be found in the town or county, and then pay him more than any other merchant would give him. First secure an honest man, and then trust him.

It will be found that wherever co-operative enterprises succeed, the patrons have learned to pull together; and wherever they have failed, one of the causes was that they were not accustomed to team work, and did not pull together. This is not surprising. The farmer in all time past has been an individualist. He has relied upon himself. He was obliged to do so. Accustomed to this, and rather inclined to distrust his neighbor, with whom he was perhaps not very well acquainted, it is not strange that farmers are slow in acquiring that confidence in each other and that ability to work to each other's hand, that recognition of leadership, which successful co-operation absolutely demands.

Farmers are more individualistic now than they were half a century ago. One man can now build a stable, if he is handy with tools; but one man could not build a barn then. He had to have a "raising." He had to call in his neighbors. He had to have a leader, and when the leader said, "Heave! O, heave!" every man had to heave, and thus raise the big beam up to the square. If one or two men failed, disaster might come to the whole neighborhood. There was team work then. The farmer has become more independent of his neighbor; hence does not recognize leadership so readily, and thus fails in one of the essentials of successful co-operation. Where men have confidence in each other, work together, pull together, and follow a leadership which they have themselves created, they can co-operate in almost anything.

We have never seen a successful co-operative movement where farmers failed to be loyal to that movement as such. They have been like all other persons, namely, more or less easily tempted by present immediate profits. To illustrate: When co-operative creameries were established, it was

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difficult to hold the patrons (there is the same difficulty now) if an outsider offered a cent or two more per pound for butter-fat than the creamery can give. It was the same way with the elevator companies. The co-operative elevator companies were obliged to require the man who accepted this higher price from a rival elevator to turn over part of the increase to the co-operative. There is no one thing that so arouses the ire of the line companies as this regulation of the co-operatives, companies as this regulation of the co-operatives, that the man who accepts a higher price shall pay a certain per cent. of the increase into the treasury of the co-operative.

No co-operative company can hope to succeed unless it is made up of men who cannot be tempted by a cent or two on a bushel of grain or pound of butter-fat. On this point human nature, not merely rural, is "unco" weak. The larger corporations have found in the past that if they could offer lower prices to the buyer and higher prices to the seller, men would desert their co-operative company and weaken it to such an extent that it could not do business, and was forced to sell to the best bidder. Then after the co-operative had gone out of existence the other company would recoup its losses and much more, by putting up prices to the buyer and lowering prices to the seller.

No co-operative company in any line succeeds unless men are broad-minded enough to see something beyond the immediate present advantage. Unless the co-operators are willing to employ business ability and pay the market price for it, unless they are willing to follow the leaders of their own choosing and co-operate with them, whether they like them personally or not; unless they are willing to forego present and temporary advantage for the sake of future and more permanent advantage, it is scarcely worth while to engage in co-operative enterprises.

What is needed, therefore, in co-operation as in everything else, is that broader education which develops strong men who can take broad views of business as well as public questions. It has been an old saying ever since we can remember, that "farmers won't hang together." This has been largely true in the past, but in coming years we will have to co-operate much more than we have ever done in the past, and we must learn to work together, beginning our training with games in the schoolyard where we play together, and play fair, and continuing it all through life in the larger game of life.

Why Farmers' Sons Leave the Farm.

Editor "The Farmer's Advocate":

Having read for some time letters appearing in your esteemed paper with the above heading, I feel tempted to also add a few lines to an old subject.

Some of the writers, ladies, evidently, from the city, who do not seem to have much to do but attend afternoon teas and balls, and study the fashions and the society columns, seem to think that the exodus is due to the slovenly surroundings in the rural districts—evidently a lack of dress-coats and low-necked dresses, so to speak. Well, I suppose the polish and whirl and society of the city are alluring, but I don't think it is quite the cause of the boys leaving the farm. The boys and girls leave the farm because they have to.

Take, for instance, the ordinary farmer, with the one-hundred-acre farm and a family of five or six boys and girls. The ordinary farm is worth about six thousand dollars, and, comparing with other lines of business, which, if they pay five or six per cent., the investor is satisfied. The farm, on this basis, yields a net return of \$300 or \$400 per year, and at this rate, at simple interest, it would take fifteen to twenty years to make the owner worth \$12,000, provided he starts with farm clear, which very few do.

However, he has to provide for his family—those five or six boys and girls, and at the same time keep enough for himself to live on for the rest of his days; and this takes money.

He may give them a thousand dollars each for a start, and if they purchase a farm and pay down \$1,000, they have a \$5,000 mortgage, at 5 or 6 per cent., to meet every year, not to speak of the cost of stock and implements, which will amount to \$1,000 more, making a \$6,000 debt, on which the farmer's son has to pay \$300 to \$400 interest each year. So you can see that, while he makes a living, he does not get rich very fast, and will not have much money to buy dress suits and attend the opera, and follow high-class society.

Of course, if the farmers were able to form combines like the manufacturers, and able to dictate what his prices would be to the consumer for his product, and to the manufacturer the price of his implements, I don't think there is any doubt but what farming would be more alluring.

I think most sensible persons will agree with me when I say most farmers are kept too busy keeping even with the world to waste time cleaning their finger-nails and shaving, and having their dress-suits pressed, and attending balls and opera, etc. And if they did, I am afraid the lady who complains about the uncouth ways of the

rural population would have to be a farmer, too, the same as the rest of us. If she would take a little time off from the rules of etiquette and study political economy, she might find that even she is a farmer, and only one of the very ordinary bricks in the building of our modern society. She would find that the toil of our uncouth farmers is the foundation supporting all trades, professions, art, etc., because everyone has to eat to live, and nearly all food is a product of the farm.

Now, instead of the farmer giving his son a farm, he educates him with the \$1,000 for a school teacher, lawyer, doctor or minister. We find that the boy can earn his own living, and be paid for his labor in these professions. He may not accumulate riches very fast, still, there is this difference in comparison with farming on borrowed money: he generally does not have to work for someone else, and pay him \$300 to \$400 a year for the privilege of making a bare living, as he would have to do were he to go farming on borrowed money.

Of course, some farmers have commenced this way, and prospered, but, unfortunately, they are only a few. I will leave to the reader which course is the most alluring one to the farmer's son.

RURALIST.

Sowing Fall Wheat.

Wheat is one of the world's staple crops. Its superiority as a human food will likely always maintain its value at a high level, while the increases in world population and decreases in productive capacity of many areas may considerably enhance the value of this cereal. In Western Canada it is the prime crop; in the older Provinces a considerable quantity of a splendid quality of this grain is grown. It is a crop of many merits, and should to a limited extent be cultivated by most every farmer. There are, of course, some natural circumstances prohibiting its universal adaptation, but these are rather confined to restricted areas.

WHY WHEAT SHOULD BE GROWN.

It is a crop with a highly-reliable market valuation, and can always be converted into cash. A man may within reasonable limits plan upon the value of his crop at seeding time, and feel sure that it is not going to fall greatly below such a price per bushel when harvested; it may be worth much more. It is in most of Canada, especially older Canada, a fairly reliable crop. There are losses by winter-killing, but year in and year out, when care is exercised, these losses are not on the whole great. For these two reasons wheat makes an attractive crop for a man to use as the source of a definite required amount of ready cash. It fits into rotations very satisfactorily, being an excellent crop for seeding to clovers and grasses. Moreover, it is nicely adjusted to other crops, both at seeding time and harvesting, coming in for harvesting between the spring grain and the hay crops, and at seeding time fitting in between harvesting and silo filling. These are all reasons which should make a moderate acreage of fall wheat appeal to any man whose conditions permit of its growing.

SOIL REQUIREMENTS.

Wheat grows best on the upland tracts of land; there seems to be a greater tendency for wheat grown in the deep black bottom lands to winter-kill. It is also true that other crops do poorer on the sharper uplands, and much better, relatively, on the rich bottoms, than does wheat. While the soil for wheat needs to be productive and comparatively rich, yet this crop does not respond to fertilizers as readily as other crops do. Wheat seems to do best in a rotation wherein the clovers are prominent, and when the manure or other direct fertilizer has been added to the land for the sake of a preceding crop, such as corn, the wheat seeming to reap more good from the residual effect of the manure than from a direct application. When manure is applied directly to the wheat land, it is best to apply it sparingly. Wheat makes a greater demand upon the phosphorus content of the land than does other crops. For this reason, sometimes the application of twenty-five pounds of phosphoric acid per acre will do more good than the addition of much manure. The addition of nitrogen and of potash separately to wheat lands has not generally resulted in marked increases in the yield.

CULTURAL METHODS.

It is generally conceded to be good practice to plow for winter wheat as early as practicable after the previous crop is harvested. There are several reasons for this. It prevents weeds from maturing, and thus works greatly toward the eradication of noxious plants. It tends to get the land into that condition of tillage and moisture content which makes for crop growth. The plowing should be from four to eight inches deep, and between those depths the condition and nature of the soil must determine what is right and needful. After the land has been plowed it should be harrowed frequently, maintaining a dust mulch upon the surface. The mechanical condition of the seed-bed treated in this manner becomes almost ideal for wheat: it becomes firm beneath, loose

and fine on top, and of a high moisture content. Neglecting these features, one's efforts are often largely in vain. If the land is allowed to remain unplowed from harvest time until just before wheat-planting, it becomes very dry usually, and in plowing turns up in large lumps, which cannot be reduced to the proper mechanical condition, or if they can the land will be in no wise suitable as a seed-bed for any crop. Plowing immediately after harvest, without the frequent use of the harrow, does not improve matters much. Early plowing, followed by frequent harrowing, thus firming the lower part of the seed-bed, increasing the moisture and maintaining a fine mechanical condition, must be clearly borne in mind by the man ambitious to grow a good crop of wheat.

TIME OF SOWING.

The proper time to sow wheat depends upon climatic conditions, the fertility of the soil, the preparation of the seed-bed, the liability to injury from the Hessian fly, and, perhaps, slightly upon the variety. The farther north we go the earlier must sowing take place. When sown too late the wheat will not have sufficient vitality to withstand the winter; when sown too early the growth will be so rank and succulent as to be injured by freezing or is in danger of smothering. In some localities early-sown wheat is subject to attack from the Hessian fly; where such danger exists, if all farmers, by agreement, sow late, it will be avoided, or by sowing early strips where the flies will congregate, and then turning those strips under. Where the sowing must be late, the best condition of soil is demanded.

DEPTH AND METHOD OF SOWING.

Drill sowing has proved in the great majority of cases to be preferable. The seed is more uniformly planted and covered; it is at a more uniform depth, and germination is insured by having the seed in moist soil. It is believed, also, to be less easily winter-killed, either by freezing or heaving, when drilled in.

The depth of sowing varies with the soil, the firmness of the seed-bed and the moisture. In the looser, sandier soils it must be sown deeper. Under ordinary conditions, the nearer the seed is covered with one inch of moist soil the better. An uneven and cloddy soil would require that some be planted deeper than is desirable to ensure the covering of all.

There is a difference in the varieties, but few men have difficulty in finding that wheat which has done well in their localities. Good plump seed should always be planted, all undesirable, undeveloped, diseased or foreign seeds being eliminated. The quantity of seed to use depends upon the variety to a large extent, but two bushels to the acre may be taken as a pretty accurate guide. If there is any probability of smut infection (and there usually is), the wheat should be treated with a formaldehyde solution, made by mixing one pound of formaldehyde with 35 gallons of water.

Growing Clover for Seed.

Editor "The Farmer's Advocate":

I was born in the Township of Wainfleet in the year 1849. My father's farm consisted of 275 acres. It was partly upland, and very rocky, and would grow wheat, clover and corn. He grew the Mammoth clover, and saved the first crop for seed, from three to eight bushels per acre, according to the year.

In the year of 1872 I bought a farm in the Township of Lobo. I have never grown the Mammoth, but have always made it a point to sow lots of clover, as I believe it is the life of a farm, and now my farm is full of seed. It is quite common to have a good stand of clover where we have not seeded.

In the second year on this farm, I saved twelve acres of red clover, that yielded four bushels per acre, which sold for \$4.80 from the huller, but since then we always clean and pile on the barn floor. In this way we get a uniform sample.

In 1889 I seeded eight acres with alsike and timothy, got a good stand, harvested the hay, and then oats, followed with wheat; in harvesting the wheat, we found we had a good volunteer catch. Early the next spring we applied two bushels land plaster per acre. We got what alsike requires—warm, showery weather; it grew from five to seven feet by actual measurement.

In harvesting the crop, we put the mowers to work about sunset, and in the morning raked while still damp with dew, and then put it into the coil, and when all was up drew it into the barn, left till winter, and threshed it out.

We fed two span of horses for two months on this crop, as our hay was covered. However, after it was threshed and sold, we realized \$362, which was \$7.50 per bushel.

But my experience has proved to me that it depends a very great deal on the weather. If dull and wet when in blossom, the bees cannot carry the pollen, therefore does not yield; and, again, if very hot about the time it is filling, it will blight. However, by careful observation, a man can tell in time to save for hay without much loss, if any. But our red clover we always cut about the 15th or 20th of June, and save the

second crop for seed from eight to twelve acres. The yield is from two to four bushels per acre; the price these last few years has been from \$7 to \$14 per bushel. In harvesting this clover, we use the mower with a drag table, raking it off in rows. In sowing red clover, we always sow in the spring, but alsike we prefer sowing in September on fall wheat. I might add just here that when the second crop of red clover is very heavy, and not very well filled, we sometimes cut for hay.

We do not make growing clover seed a specialty any more than any other crop. We try to grow some of everything, and never let anything go to waste.

A few years ago I came into possession of fifty acres of grass land, a part of which had been newly seeded to timothy. I turned a bunch of steers on it in the spring, but, as I expected, the steers did not take to the timothy. About the first of August I put the binder over it, cut it very high, and threshed 80 bushels, and sold the seed for \$2.60 per bushel.

Middlesex Co., Ont. JOHN C. ZAVITZ.

Forests as Fertilizing Agents.

Editor "The Farmer's Advocate":

Your correspondent, J. H. Burns, in the issue of July 28th, enquires as to the effect of forest growth upon soil fertility.

Scientists investigating this matter in the forest experiment stations of Europe have been led to believe that the presence of forest growth actually enriches the soil, especially increases the nitrogen content, even if all the timber produced be removed.

On a sand dune planted to pine in 1850, a fine forest was produced by 1906. A sample of the soil was taken to a depth of six inches, and when examined showed that over seven tons of organic substance had accumulated per acre, containing 248 pounds per acre of nitrogen. As there was little or no nitrogen in the original drifting sand this was an average net accumulation of 4.5 lbs. of nitrogen per acre per year during the life of the forest. In another case, under a specially-made plantation of pine, after nine years the nitrogen accumulation was 7.2 lbs. per acre per year. Under an old oak forest the accumulation of nitrogen to a depth of 32 inches in the soil was 6,529 lbs. per acre.

The origin of this nitrogen is explained in several ways. Atmospheric precipitation carries about 10 lbs. of nitrogen to the ground per acre per year. A large part of this is held in the soil. Certain small hairs on the leaves of many trees are supposed by investigators to possess the faculty of taking up nitrogen from the air. It is at least certain that leaves bearing these hairs contain nitrogen which is added to the soil when the leaves are dropped. Bacteria and low forms of fungi living in the litter on the forest floor are known to gather nitrogen in much the same manner as the bacteria associated with legumes. In this way the upper layers of forest soil are enriched.

The annual consumption of nitrogen for wood production by beech, spruce, fir and birch is 9.3, 11.9, 12 and 6.5 lbs. per acre, respectively, in a fully-stocked forest; while the litter returns to the soil annually 40 lbs. per acre under beech, 28.8 lbs. under spruce, and 26.1 under pine. This litter is thus a valuable addition, and replaces more than the trees remove. The figures previously given in "The Farmer's Advocate" show that the quantities of phosphorus and potash actually removed from the soil by a crop of timber are small, less than 15% of the quantities annually removed by the common grain crops. It must also be remembered that the forest growth by maintaining humid conditions at the surface of the soil and by promoting the aeration of the upper layers of soil is constantly rendering available for plant use large quantities of these mineral foods.

The enriching of the soil by forest growth is known to the farmers of some localities in Europe. They take advantage of it by removing the forest litter for fertilizer, and in some instances by practicing a rotation in which worn-out lands are renewed by being devoted to a timber crop for 20 to 30 years or longer, then cleared and farmed again. The ready market for timber makes this profitable, and it is stated that the land is improved.

Mr. Burns says he has not seen that tree roots penetrate deeply into the soil. The depth of the roots depends upon the species of tree, the depth of the water-table and the richness of the soil. The roots of all trees extend until they receive enough food, and this they usually find at a much greater average depth than do annual crops. Many species—oaks, some pines, hickory, maples, etc.—produce long taproots, which penetrate several feet into the soil.

Mr. Burns depends upon cordwood as the product of a wood lot. A wood lot, when in good condition, should produce 60% or more of more valuable wood than cordwood. What should be grown depends upon local markets and soil, but some things which might be profitably considered by farmers in Ontario are ash and hickory handle

stock, elm stave and hub stock, larch and chestnut poles and posts, locust posts, different hardwoods suitable for carriage and implement building, and white-pine lumber, box and pail timber. These are only a few of the possible products, a few acres of which would always be easily salable at the factories in the small towns and cities.

One possible reason for the difficulty Mr. Burns finds in selling timber from wood-lots is, that in the present condition of wood-lots there are so very few merchantable logs adapted to any one purpose that no manufacturer can make as good an offer as he could were there several acres of timber of standard quality. Manufacturers do prefer the southern hard pines for some purposes, but the furniture, carriage, implement, cooperage and handle factories in Canada, mostly in Ontario, import each year large quantities of hickory, ash and other hardwoods from the United States. The hardwood country in the States is being depleted, and when the pinch comes, as it will in less than a decade, prices will certainly go higher; they will inevitably go to such a point that timber as a crop will be a common feature, for it is impossible to get along without timber.

Contrary to Mr. Burns' opinion, wood for fuel and building material is not going altogether out of fashion. Wood for fuel may not be an actual necessity, but it will be a safeguard, and for many people an economy so long as Central Canada is dependent upon foreign coal measures. Wood for building material, and especially for hundreds of other uses, will always be a necessity. Steel, iron, cement and other substitutes will do a great deal to lower the present Canadian per-capita consumption of 240 cubic feet of wood per year, but even with a much greater use of these substitutes than will obtain in Canada for two or three generations, Canadians will still use more wood than the very economical iron- and cement-loving Germans, who use 43 cubic feet each of wood per year. The Germans have nearly all their waste land, and much land that would produce crops, under timber. They do this because it is profitable, and because they have learned that it is necessary if they are to support a dense population in comfort and prosperity.

H. R. MacMILLAN.

Dominion Forest Service.

THE DAIRY.

The New Farmer.

We have the New Woman, why not the New Farmer? Truly, there is a new development of knowledge, and of interest as well on the part of the farmer in that knowledge.

The National Geographic Magazine speaks as follows of the recent development of interest in the West in the problems of modern farming and a better life for the farmer:

"It is remarked everywhere in the West that the mental attitude of the farmer has undergone a pronounced change. The factors of better roads, rural delivery, telephones, trolley lines, co-operation, and frequent association with neighbors are primarily responsible. For several years nearly all professions, from bootblacks in Butte to steep-climbers in New York, have been organized, except farming. Acting alone, the farmer has been for years at the mercy of the commission man or the elevator company.

"In the irrigated valleys of the West to-day there have been perfected a number of strong and successful business organizations for handling special crops. Fruit-growers' associations in several districts are marketing crops each year valued at millions of dollars, and largely as a result of up-to-date methods, have secured control of the best markets of the world for their production. The success of these organizations, the opportunities they offer for first-class business ability, as well as the assurance of profits in agriculture, have excited the widespread interest among many city-bred people, and have drawn thousands back to the country who could never have been induced to leave the city to take up the old system of farming."

There is something in the foregoing for the dairy farmer to think of. A large proportion of them are already organized in creamery and cheese-factory associations, but they stop there. How well they could go on to the doing of other things. There is the buying of pure-bred animals, of machinery, of fertilizers, of seeds for planting, of feeds for cows, and yet they are powerless to act.

Farmers in the irrigated districts can do these things, but other farmers cannot. Are we to believe that other farmers are so far behind the lighthouse in organizing ability that it is impossible for them to do these things? Evidently they think so, and "as a man thinketh so is it unto him."

Care in Milk-making.

Cheese-making is a fine art and a skilled science combined. In order that the product, a prime cheese, be produced, not only must knowledge and skill be furnished in the maker, but there must be supplied, says the Agricultural Gazette, pure, clean whole milk from healthy cows, housed and tended in a healthy manner. Proceeding in the discussion that paper says:

Most of the faults in cheese are due either directly or indirectly to bacteria introduced into milk with dirt. The milk when in the udder of a healthy cow is practically free from bacteria, the only germs present there being those which have entered the inside of the teats since the previous milking. Sometimes germs enter the lower part of the milk cistern of the cow's udder, but after the first few squirts of milk have been drawn from each teat any germs that were inside the teats get washed away, and then sterile milk is obtained, unless the udder is diseased. It will thus be observed that when milk is taken to the dairy in a badly contaminated state, the contamination is largely due to carelessness on the part of the persons employed to deal with the milk.

GERMS IN THE AIR.

The air of the cowshed reeks with germ life of all descriptions, and immediately on the exposure of the milk these germs readily enter the milk. With regard to bacteria, it may be as well to point out that milk contains every food constituent essential to the growth and development of germ life, and when freshly drawn from the cow it is at a very suitable temperature for germs to develop therein. It has been estimated that under favorable conditions it is possible for one germ to increase to 16,000,000 in 24 hours, hence the necessity for keeping milk free from bacteria.

A great many faults in cheese are due to the work of the undesirable type of bacteria that are frequently found present in the milk before it is converted into cheese. But it must not be supposed that even all the bacteria in the atmosphere of the cow stable are of the injurious nature; in fact, some kinds of bacteria, indeed, are specially cultivated for the useful functions they perform.

There is always the probability of the injurious species of bacteria being present in the milk, and in order to avoid the risk of the undesirable kinds predominating, the bacterial content of the milk must be as low as possible until the milk is actually in the cheese vat. Then it is advisable to inoculate it with a pure culture of the lactic-acid-producing bacteria, which are essential for the production of good cheese of practically all varieties.

WARM MILK SHOULD BE REMOVED QUICKLY

In order to keep the milk as free as possible from bacteria, it should never be left in the cow stable longer than is absolutely necessary, as warm milk when exposed to the air for only a short time will absorb large numbers of bacteria, including those of the injurious type. The milking, unless it is carried out under scrupulously clean conditions, is another source of milk pollution with injurious germs. Some milkers are not too clean at their work, and this source of contamination is at once evident if the milk, immediately on being removed from the cow, is passed through a milk filter having in it a white cotton-wood pad as the filtering medium.

Even when every precaution is taken in the cowshed to obtain clean milk, it not infrequently happens that dust, scales, hairs and other undesirable matters find their way into the milk. All dust and foreign matter that enters the milk carries with it large numbers of bacteria which prove deleterious to milk and products made therefrom.

It is impossible for the farmer to keep milk absolutely free from bacterial contamination, but the lower the varied bacterial content of the milk the better will be the results of the commodities prepared therefrom.

It is imperative that all sources of impurity must be vigorously guarded against, and it is only by observing scrupulous cleanliness that milk of a high standard can be secured.

A LESSON FROM THE PASTURE.

In some localities the cows are milked out in the pasture, and, from a bacteriological point of view, milk obtained under these conditions is comparatively clean. The cleanliness of milk, so far as bacteria are concerned, is not estimated by the number of organisms in the milk, but by the kinds present. It is not difficult to discover the source of supply in the cowshed of these objectionable organisms.

Many injurious bacteria thrive in dirt and filth; the decomposition of dung and urine is essentially favorable to their multiplication. The air of the stable is generally at a suitable temperature for these germs to perform these functions, which consist of decomposing dung and urine, and also of producing volatile substances which are usually noticeable in the cowshed, as the smell permeates the air. The more efficiently ventilated and better lighted a cowshed is the less will be the risk of the milk becoming bacterially contaminated. A great many of the bacterial taints in cheese and

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butter, such as bitter and fishy flavors, are due to the action of organisms which enter the milk from the air of the stable. Of course, there are always present in greater or smaller numbers the organisms whose beneficial action we depend on for the souring of milk, an essential in cheese-making, the organisms the cheesemaker desires being lactic-acid-producing bacteria.

In clean milk the lactic-acid-producing germ predominates, and most other species of bacteria are soon eliminated by the growth of this beneficial variety.

Alfalfa Hay Valuable.

We have commonly heard it stated that alfalfa hay well preserved is almost equal to bran, pound for pound, in feeding dairy cows, but men have either looked upon such an assertion as the overestimation of an enthusiast, or the assumption of an uninformed party. At least, they have not generally acted as though they considered the statement true, or there would be a great many more fields of alfalfa producing its tons of the splendid crop, thereby avoiding the heavy expenditure that is almost necessarily entailed in intensive dairying. But so valuable a crop cannot long be neglected. The Illinois Experiment Station has recently published Bulletin 146, which sets forth in some respects the high merit of alfalfa for dairy cattle. It was fed in a trial against timothy hay in one experiment, while in another it was balanced against bran. In the first trial the rations were the same in every respect, excepting that one lot received timothy hay, while the other lot received an equal amount of alfalfa hay. The other components of the ration were: Mixed grain, 13 pounds; corn stover, 10 pounds; of hay, 10 pounds per day were fed. It was found that the use of alfalfa, instead of timothy hay, increased the quantity of milk seventeen per cent.

In the second trial, a basal ration of clover hay, 6 pounds; corn silage, 30 pounds, and corn meal, 6 pounds, was used. To this was added for one lot all the choice alfalfa hay the cows would eat up clean, while to the other lot was given an equal amount of wheat bran, by weight. This amount proved to be eight pounds. The cows getting alfalfa gave just as much milk as those getting bran. While this does not prove alfalfa to be equal to bran in all cases, it proves it equal in this case, and consequently must be very close to it in all circumstances as a feed for dairy cows. There can be little doubt of this, since, in composition, alfalfa carries practically as much as and frequently more digestible protein than bran, while in mineral matter it runs considerably higher.

Camembert Cheese.

This is a French cheese, though it is manufactured to a small extent in England, and to a larger extent in the United States.

It is made from new milk, or milk that has not developed more than .23 of acid.

It may be eaten either fresh or ripened; if ripened, it is made either from whole milk, or milk which has been slightly skimmed ($\frac{1}{4}$ per cent.). The ripened cheese is ready for consumption in from four to six weeks.

MANUFACTURE OF CAMEMBERT NOT INTENDED FOR RIPENING.

It requires five pounds of good milk to make one cheese. The milk is brought to a temperature of 82 to 86 degrees F. In the winter, a little coloring should be added, enough to give the tint of a summer-made cheese; also a little culture, about 1 dr. per 100 pounds milk, to retard any gas formation.

Rennet is added at the rate of 2 drs. per 120 pounds of milk; this amount should bring about a firm coagulation in 1 to 1 $\frac{1}{4}$ hours. When adding the rennet, it should be stirred into the milk for five minutes, to insure even mixing; ten minutes later the surface should be agitated to prevent the cream from rising to the surface. If this last stirring is omitted when the milk coagulates, a layer of cream will be on the surface, which will be mostly lost, resulting in a dry cheese.

Molds or hoops, straw mats and boards, should now be prepared. The straw mats and boards should be first scalded, and then cooled, and left to soak till wanted for use.

When the curd is firm enough to dip, place one straw mat on each board, and two molds on the board and mat; that is, for 100 pounds of milk, 10 boards and straw, with 20 molds, will be required, making 20 cheese. Dipping is done by moving the curd from the vat or can into the molds with a long-handled culture dipper. At the first dipping, only enough to cover the bottom of the molds is added; at intervals of 15 minutes a little more curd is dipped, until the molds are full and all the curd is removed from the vat.

When all the curd is dipped, the cheese may be turned by means of placing another mat and board on the top of each set of molds, and inverting them, removing the one which was at the bottom, but will now be at the top. The cheese are now left to drain till firm enough to be turned with the hands.

When the cheese are firm enough to stand up without the molds, the molds may be removed and the cheese salted. Salting is done by rubbing in salt from the outside all over the cheese, at the rate of one ounce of salt to every two cheese.

The cheese should now be placed on clean straw mats and boards, and left for 24 hours to finish draining and allow the salt to be absorbed into the cheese, being turned once during this time.

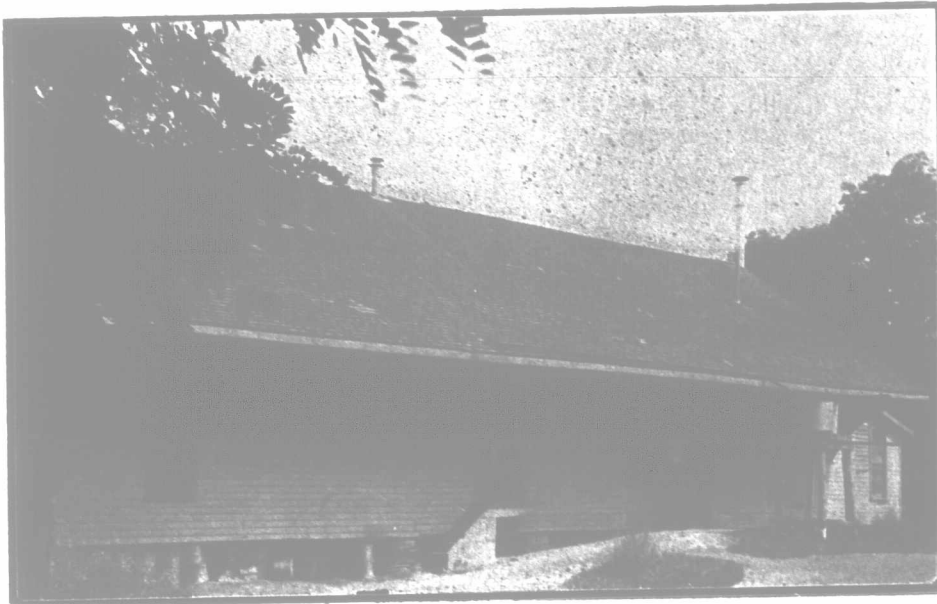
At the end of this time, the cheese should be put in a refrigerator till sold, when they should be each placed in a separate box lined with butter-paper, in order that they may reach the consumer in good condition.

The making-room should be kept at a temperature of 68 degrees F., and as uniform as possible, and the atmosphere should be distinctly humid, otherwise the cheese will dry on the surface, which will retard the draining. FRANK G. RICE.

Willow Cheese Factory.

A well-built, well-conducted, well-located cheese factory is the Willow Factory of H. Bissell's, Brockville, situated in Augusta Township, Leeds County. This is one of the oldest factories, and also one of the largest, in Eastern Ontario. It was originally constructed about forty years ago, and was rebuilt eighteen years ago. It is situated on a high, dry site, the land falling away from it gradually in the rear. The building is 71 x 36 feet, outside measurement; the make-room contains five vats, and is 40 x 36 feet in size. The curing-room has accommodation for seven hundred cheese, but lacking the cool-curing facilities does not often contain a great many. This room is about 30 feet square, having two walls, each consisting of two thicknesses of lumber with paper between, and a dead-air space in the middle. To the back of the factory has been added an ice-house and a buttermaking room, in which is a refrigerator for the butter.

This factory has many conveniences, and many evidences of a progressive management. The milk is unloaded by means of a steam crane, the curd is cut by steam, there is a whey measurer, and last, but not least, a telephone. The curd is weighed



Willow Cheese Factory, Augusta Township, Leeds Co., Ont.
H. Bissell, Brockville, proprietor.

before going into the presses, thus making for a most uniform lot of cheese. The whey is pasteurized, and the sewage from the factory is disposed of by underground drainage.

Whey butter has been made here for four years, churning being done every day, and a very good quality of butter being turned out—in truth, the maker rather enjoys telling how he won first prize on whey butter in competition with creamery-made lots at a Brockville fair.

G. A. Manhard, of South Augusta, Ont., who has been making cheese for twenty-seven years, has been in this one factory for all but three of those years. He reports a decrease in the number of patrons, the number of cows and in total milk received; last year there were 53 patrons, while this year there are but 47. Cheese of excellent quality, smoothness and firmness was seen in the curing-room. The addition of cool-curing, to prevent the close shipping of the cheese and allow for proper curing and aging, would supply the one thing lacking to make a thoroughly up-to-date A1 cheese factory.

"The sire is half the herd." This is one of those old sayings that has been with us so persistently that we have come to believe it, notwithstanding the fact that it is not true, says Pacific Dairy Review. The fact is that when we speak of herds the sire is the whole herd. As the sire is, so must the future herd be. There is no half-way business about it. The man who breeds to poor sires will have a poor-bred herd, just as sure as the man who breeds to good sires is sure to have a good herd. The sire may

be half of the first generation of his descendants, depending upon his prepotency, but a dairy herd is not a matter of a single generation of cows. It is pretty much a matter of keeping everlastingly at it, and sooner or later the whole herd must be like the sire, either all good or all bad.

GARDEN & ORCHARD.**Different Cover Crops.**

Canadian orchardists need more and more to study and use cover crops in their orchards. Clean cultivation is being generally practiced, and hand in hand with it goes the growing of some crop for the good of the land between the orchard crops. W. S. Thornber, Horticulturist of the Experiment Station at Pullman, Washington, treated upon this subject in an excellent manner recently, from which we make the following extracts:

From the heavy and exhaustive nature of the crop and the necessary cultivation, orchard trees are one of the hardest crops on the soil. The soil is bare and exposed to the elements during the greater part of the season, the fruit is all picked and carefully hauled away, the leaves that should naturally fall to the ground and form humus blow into the adjoining fields, and the prunings are burned in piles or left in some remote corner of the orchard to decay, and, incidentally, form the breeding grounds of the various foes of the fruit-grower. There is a constant demand upon the soil for plant food, but nothing is ever permitted to return. A system of this kind cannot help but result in the depletion of the soil, and serious if not permanent injuries to the horticultural industries of the state.

A cover crop is any crop grown among orchard trees during the interval between the regular fruit crops or normal season of tillage. It occupies the land at a season of the year when the fruit trees require little or no plant food, and is of value to orchards in the following ways: It directly improves the physical condition of the

soil by the addition of humus and the loosening up of the subsoil by root action. It prevents hard soils from cementing and clay soils from puddling. It makes the soil more moist by holding the snows and rains until they have had a chance to soak into the soil. By drying out the soil early in the spring, thus making early tillage possible. It serves as a protection of tender roots from frost. It catches and holds the easily-lost nitrates of which the trees are not in need at a season of the year. It renders plant food more available by root action and the decomposition of humus. By the addition of humus it

makes cultivation and irrigation much easier and more effective. The leguminous cover crops add plant food by appropriating the nitrogen of the air. It checks the growth in the fall and causes the wood to completely ripen up, thus preventing fall or winter injury. It prevents erosion on steep orchard lands. It keeps weeds down and catches and holds the leaves of the trees. A series of cover crops on alkali orchard lands will very materially reduce the quantity of alkali that comes to the surface.

The fall or winter injury in young orchards is due frequently to the late growth of the trees, which causes them to go into winter with a full flow of sap and a lot of unmaturing wood in the stems, which gets killed by the first heavy frost in the late fall or early winter. This can be readily overcome by the systematic use of cover crops, which will take up the surplus water and available plant food late in the summer and early in the fall, and in this manner cause the wood and buds to mature early.

The orchard should be plowed or disked as deep as possible without injuring the tree roots, and as early in the spring as the weather and nature of the soil will permit the working without injury. Immediately after plowing the surface should be put in fine tilth with a harrow or some other surface-working tool, and perfect condition be maintained through the growing season. [In Canada the proper time to sow orchard cover crops is from June to the end of July, according to climate.—Ed.]

Just previous to the last harrowing the cover crop should be sown, either with a common grain

drill or broadcasted on the surface and thoroughly disked into the soil. The drilling in of the seed with a common grain drill gave the best results, since it placed the seed down in the moist earth, permitting the immediate germination, and the getting of the crop in definite strips between the trees, thus keeping it away from the trees, which would otherwise make hoeing necessary and afford a harbor near the trees for mice and moles. Immediately after seeding, the ground should be thoroughly worked down with a harrow, or some other surface-working tool. While this has the disadvantage of leaving the surface smooth, yet the cover crop will serve all the purposes of rough surface, and has additional advantages.

Plants that can be profitably used in the orchard as cover crops are divided into two groups or classes, according to their food-storing habits. The leguminous, or plants which by the aid of root bacteria take nitrogen from the air and store it up in the roots, and the non-leguminous plants, or those that are unable to appropriate the nitrogen of the air. To the first group belong such plants as clovers, vetches, peas, etc., which are commonly known as nitrogen-gatherers; while to the second group belong such plants as rye, wheat, corn, buckwheat, rape, and most of the common orchard weeds, which are known as nitrogen consumers. From each of these groups crops may be selected that will survive the winter, and thus serve all the purposes of a hardy cover crop.

In the selection of a cover crop, it is first necessary to determine the needs of trees; and, second, the physical needs of the soil. If the trees are making a poor, unsatisfactory growth, it is necessary to use a nitrogen-gathering crop in order to add nitrogen as well as humus, but if the trees are making a long, sappy growth, and producing little or no fruit, it will be necessary to use a nitrogen consumer for the purpose of checking the tree growth and compelling fruit production.

The following crops have been tested as cover crops, and have given the following general results:

Hairy Vetch.—This plant has proved itself to be by far the most satisfactory nitrogen-gathering cover crop that we can use here in the Northwest. Coming up as it does immediately after sowing, and continuing to grow until cold weather sets in, and in this way forming a low, dense mat before winter, which is capable of holding leaves, trash, etc., and thus preventing washing during the winter. In spring it starts into growth early, and by the last of April or first of May it has produced from five to twelve tons of green manure per acre.

Rye.—Fall rye is probably the best plant to use as a cover crop, where the addition of humus and checking of growth are the main features sought; however, it adds little plant food, and must be watched very closely in the spring or it will rob the trees of moisture and become too strawy to serve the purpose of a green manure. Rye has the advantage of germinating with a minimum amount of moisture; growing on land that is too hard to grow almost any other crop; producing a late fall growth and starting very early in the spring, thus permitting early plowing. The leaves of the young plants lie very closely to the ground, and protect the soil somewhat better than wheat.

Wheat.—Winter wheat serves the purpose of a cover crop where it is impossible to secure seed rye. However, it is more difficult to get started in poor or clayey soil, and does not grow as late in the fall nor start as early in the spring as rye. Since it is necessary to plow early in some sections, this is a disadvantage. The wheat did not stand the winter so well as the rye.

Tillage vs. Sod Mulch.

To determine whether the apple thrives better under tillage or in sod, the New York Experiment Station at Geneva is conducting two experiments. A preliminary report on one of these is given in Bulletin No. 314 of the Station. The method of tillage chosen was to plow in the spring, cultivate until late in July, and follow with a cover crop. The sod method chosen was that known as the sod mulch method, in which the grass is cut as a mulch. The results show that tillage seems to be better than sod for the following reasons:

The results of 120 moisture determinations in the orchard (where the tests were conducted) show the differences in tree growth and crop in the two plots of this experiment are mainly due to differences in moisture, the tilled plot having most moisture.

As a consequence of the reduced water supply in the sod plot (there is a reduced food supply; for it is only through the medium of free water that plants can take in food). Analyses show that the differences between the actual amounts of plant food in the two plots are very small.

Analyses show that there is more humus in the tilled plot than in the sod plot, contradicting the oft-made assertion that the tillage method of managing an orchard "burns out the humus."

At a depth of six inches the tilled soil is 1.1 degrees warmer in the morning, and 1.7 degrees

at night, than the sod land; at 12 inches the tilled soil is 2.3 degrees warmer in the morning, and 1.8 degrees in the evening.

We are justified, without the presentation of specific data, in saying that a tilled soil is better aerated than sodded land.

Soil investigators are well agreed that beneficial micro-organisms are found in greater numbers in a cultivated soil than in other soils.

The following application of the results of this experiment may be made:

Nearly all the plants which minister to the needs of man are improved by tillage; the apple does not seem to be an exception.

Results as positive as in this experiment can be made very comprehensive; they should apply to all varieties of apples, and to nearly all soils and locations.

The experiment does not show that apples cannot be grown in sod. It suggests, however, that apples thrive in sod, not because of the sod, but in spite of it.

While moisture is by no means the only factor to be considered in the controversy over the sod and tillage methods of management, it appears to be the chief one.

There is nothing in this experiment to indicate that trees will become adapted to grass. The sodded trees began to show ill-effects the first year the orchard was laid down to grass, and each succeeding year has seen greater injury.

Cold Storage of Apples.

With the increasing areas devoted to orchard fruits, not only in Canada, but also in the United States, there must come an improvement in our storage facilities, and a widening of the market, to maintain the same degree of remuneration for the producers. With this end in view, Dairy and Cold-storage Commissioner Ruddick has been investigating cold-storage possibilities for apples this last year, and presents the result of his work in Bulletin No. 24 of the Dairy and Cold-storage series. Apple-producers will do well to get the bulletin and study the complete report. The main points of it are here given:

During recent years, the amount of frostproof storage space for apples has been largely increased throughout the apple-growing sections of Canada. The following statistics relating to such storage have been collected by this office:

Special Frost-proof Warehouses in 1909.	Number of Warehouses	Barrels stored.
Ontario	56	219,000
Nova Scotia	70	386,000
New Brunswick (St. John).....	7	18,000
Quebec (Montreal)	37,000
	133	660,000

It is the practice to repack practically the whole of this large quantity of apples, at very considerable expense. This refers principally to the apples stored in the special warehouses. The repacking may be necessary under these conditions of storage, in order that the rotten and defective apples may be discarded, but it results in serious damage to the sound fruit by increasing the number of bruises, to which the apples are more liable than they are at harvest time, on account of their riper and softer condition. These repacked apples are sent forward to market during the winter and early spring months. It is an undeniable fact that a large proportion of them are in a more or less overripened and damaged condition. The shrinkage which occurs in repacking is a direct loss, amounting, on the whole, to a very large sum. The indirect loss from the demoralizing effect of a large quantity of overripe and damaged fruit on the market is also great, and difficult to estimate.

As the crop of apples is increasing from year to year, and the industry is growing in importance by the opening of a large market in the Prairie Provinces, in addition to the well-sustained demand in Great Britain and continental countries, it is obvious that any means which may be adopted for better preservation, and to reduce the waste and cost of repacking should be a matter of interest to the fruit-grower and dealer.

COLD STORAGE FOR APPLES.

Cold storage, as a means of preserving the apple crop, is attracting more attention every year. In the State of New York, a very large percentage of the apples which are required for winter use are placed in cold storage direct from the orchard. These apples are not repacked, as a rule. It is estimated that over 6,000,000 barrels are cold-stored every year in the United States.

Up to the present time, cold storage has been used but little to preserve the apple crop of Canada. Only about 60,000 barrels of apples were cold-stored in different parts of Canada during the season of 1909-10. This failure to employ cold-storage is partly due to a lack of cold-storage facilities at suitable points, and partly to a lack of information on the part of growers and dealers as to the benefits that may be derived from the use of such facilities.

PLAN OF EXPERIMENTS.

With a view of making a practical test of the advantages of cold storage for late winter and spring shipments, the Minister gave his authority for the purchase of a quantity of apples for that purpose last autumn.

The following plans were carried out:

The two carloads grown in Elgin County, Ontario, consisting of Spies, Baldwins and Greenings were stored at London, with the expectation of selling them during the spring in the Ontario markets. It turned out, however, that the markets were overloaded with ordinary storage stock, and for that reason they were shipped to Calgary.

Several lots grown in Ontario County were stored at Oshawa, Montreal and St. John, and shipped across the Atlantic.

A tendency to early decay was a marked feature of the apple crop of 1909, and this is a point that should not be lost sight of in considering the results of these trials, particularly in regard to the preservation of the apples.

The apples purchased were the ordinary commercial packs of different growers, as represented by the Oshawa Fruit-growers, Limited, and the Sparta Co-operative Fruit-growers' Association.

It was thought advisable to have one carload of apples held in an ordinary frost-proof storage for the sake of comparison. These apples were from the same orchards, and packed by the same persons as the apples stored at Montreal and St. John.

With the exception of lots 1 and 2, the apples were carried in cold storage across the Atlantic, and the two Calgary lots were shipped in refrigerator cars. All the apples carried in cold storage were held at a temperature of 32 to 34 degrees during the whole storage period.

While the Department did not realize an actual profit on the apples, on account of expenses incurred which are not encountered by apple-growers, they found out valuable advantages arising from the cold storage of apples. These conclusions Mr. Ruddick discusses under separate heads.

FROST-PROOF VS. COLD STORAGE.

For the first six weeks, the temperature in the frost-proof warehouse was from three to ten degrees too high, but after that it was equivalent to cold storage. The difference in the storage temperature as between lots 1 and 2 was not very great, and yet it was sufficient to cause a noticeable difference in the keeping of the apples in favor of cold storage. The difference would have been more marked if lot 2 had been placed in cold storage promptly after picking. Every result in these experiments points to the importance of immediate storing after picking.

EARLY VS. LATE PICKING.

Special tests were made with Spies and Greenings to determine the effect of early and late picking. There was a difference of two weeks between the two pickings. Needless to say, the later-picked apples had the better color and appearance.

A careful test of the keeping quality of these apples, picked from the same trees at different dates, was made by removing sample boxes from the cold storage on April 4th, and keeping them at ordinary room temperatures at this office. They were examined from time to time, and it was found that the late-picked Spies showed rather the better keeping quality, although the difference was not very marked.

The early-picked Greenings were badly scalded when removed from cold storage, while the later-picked ones were almost free from that defect. The later-picked Greenings kept rather better than the early-picked ones.

DELAYED VS. PROMPT COLD-STORING OF APPLES.

The advantage gained by the prompt cold-storing of apples after picking is one of the most striking lessons to be drawn from these trials. This points to the advisability of having the cold-storage facilities for apples located as near as possible to the point of production.

COLD STORAGE AND REPACKING.

Although the season was a rather unfavorable one, on account of the early deterioration of the Spies, our experience in these trials points to the possibility and the practicability of shipping carefully-packed winter apples, that have been promptly cold-stored without repacking. It would be an immense advantage to the apple trade if repacking could be dispensed with.

EXTENDING THE SEASON FOR GREENINGS.

It is quite evident that the usual season for Greenings may be extended several weeks if the apples are well matured on the trees and placed in cold storage without delay after picking. The Greenings stored at London were stored in Calgary during the last week in April, and gave good satisfaction. A number of boxes stored in a cellar were reported to be sound and in good condition, except scald, on June 18th. However, we do not advise that Greenings should be kept as late as the dates mentioned. It would be well to go slowly in the matter of holding any variety much past its recognized season. The thing which demands first attention is an improvement in the condition of the apples as now shipped.

THE KEEPING QUALITY OF APPLES COMING OUT OF COLD STORAGE.

It is very frequently asserted that apples deteriorate quickly after being removed from cold storage. It would seem to depend entirely on the stage which the ripening process had reached. Apples ripen slowly in cold storage. If they are held until the limit is nearly reached, they naturally deteriorate quickly when removed, but no more quickly than they would if the same stage had been reached in ordinary storage at any temperature.

Notice to Fruit Shippers.

In order to assist in the establishment of an export trade in early apples and tender fruits, the undersigned has again been authorized to arrange with the steamship companies for the reservation of cold-storage chambers for fruit only, on steamers sailing from Montreal to Glasgow, London, Liverpool and Bristol, as follows:

- Port, Glasgow; steamer, Saturnia, line, Donaldson; sailing date, September 8th.
- Glasgow—Hesperian, Allan; September 17th.
- Glasgow—Ionian, Allan; September 24th.
- Glasgow—Grampian, Allan; October 1st.
- London—Huron, Thompson; September 17th.
- London—Devona, Thompson; September 24th.
- London—Cervona, Thompson; October 1st.
- Liverpool—Megantic, White Star—Dominion; September 17th.
- Liverpool—Dominion, White Star—Dominion; September 24th.
- Liverpool—Laurentic, White Star—Dominion; October 1st.
- Bristol—Royal Edward, Canadian Northern; September 15th.

One chamber on each of these steamers will be available for shipments of fruit at the regular rate of freight, to be paid to the steamship companies in the usual way. A proper temperature will be maintained in these chambers, regardless of the quantity of fruit carried. In every case shipments should reach Montreal not later than the morning previous to the day of sailing. The Department of Agriculture will assume no responsibility in connection with these shipments, but there will be the usual supervision by our cargo inspectors at Montreal and at the port of destination. Thermographs will be placed in these chambers, so that a complete record of the temperature on each voyage will be secured.

As the space in these chambers is limited, shippers who wish to take advantage of the facilities offered should make application for space to the steamship agents as early as possible before making shipments. Applicants should state the kind of fruit and the number and size of the packages to be shipped. Freight will be accepted in the order in which the space is booked.

In connection with these sailings, arrangements will probably be made with the railways to run one or more iced cars weekly to Montreal to pick up export shipments of fruit. Full particulars of this special iced-car service will be given later. Meanwhile, shippers are reminded of the fact that iced cars may be obtained on both the Canadian Pacific and Grand Trunk Railways until October 1st, for export shipments of not less than 24,000 pounds of fruit from one station, on which this Department pays the cost of icing up to \$5.00 per car.

Prospective shippers are requested to advise the Dairy and Cold-storage Commissioner, Ottawa, as to the date when shipments will be made, and the quantity and kind of fruit to be forwarded.

POULTRY.

Keep your henhouse cool during the summer, but avoid drafts. Roosting in a draft has sent many a promising youngster to an untimely grave.

Keep the drinking vessels filled with fresh water. More or less food escapes from the beak of the little chick while drinking. This food soon becomes sour in the warm weather, and the water is foul.

Pure air is free and inexpensive, and will enter every nook and corner of the poultry-house if it is permitted. It is one of the very essential things to the profitable raising of poultry. Close, stuffy quarters are very injurious.

When you whitewash the interior of the poultry house, mix a liberal amount of some good disinfectant or crude carbolic acid with the whitewash just before applying it. This will insure the destruction of all mites with which it comes in contact.

When fowls produce deformed or soft-shelled eggs they should have all stimulating food withheld from them for a time. Hard grain should take the place of soft food, and some Epsom salts, about a teaspoonful to every pint of water, until the effect is effected.

Marketing Chickens.

Just how much profit farmers are going to make out of the chicken crop depends largely upon their treatment from this out.

Owing to what has already been done, or left undone, some farmers will not make any profit, no matter what they do, but for the person who has a flock of growthy chicks, of a good table breed, his treatment of them for the next few months will determine to a large extent whether his profits be large or small.

KEEP THEM GROWING.

To get the best out of the chicks they should be kept growing. Never let them become stunted. Chickens are the same as other animals, once allowed to go behind they are never the same again. Though growing chicks that have free range are not always fat, they have a certain quantity of flesh, and when a chick loses that plumpness along the breastbone, it is not doing as it ought. Give more feed or change the ration a little; if this does not mend matters, look for other reasons, and remove the cause.

It is said that "a hungry chicken is a healthy chicken," but a chicken that is hungry enough to suffer is not profitable. Never let the growing chicks want for food.

HOPPER FEEDING.

A good method of feeding the chicks without too much labor is by means of hoppers. We have two or three thousand chicks running at large that are fed about once a month. They are housed in colony houses in a clover field, in which is a patch each of corn and buckwheat. The houses are placed upon blocks to give shade; hoppers are placed in the field, one for every three or four houses. Feed is put into these hoppers whenever needed, and the chicks are allowed to help themselves. When chicks have free range they will not require much feed, but it pays to have some available when they wish it. No more feed will be used this way than if fed at intervals, and the chick will be sure to have sufficient.

WHAT TO FEED.

Some writers tell us that the various ages should have feed particularly suited to the age of the chick; that a month-old bird must be fed slightly different to one two months of age. This looks reasonable until one commences to work it out; it is then found to be unworkable for the average poultry-raiser. In my experience I have found that the simpler one can make the feeding the better. It doesn't necessarily take a chemist to mix feeds for poultry, and growing chicks will thrive on any good food they may get. True, the small chick just out of the shell must have food suited to its size, but even that food need not be so different in substance to that fed the laying hens. The incubator chick is fed oatmeal, boiled egg, cracked wheat, etc., and so is the hen, only in different form; the oatmeal is fed in the whole oat, the egg in meat scraps, cracked grains usually fed whole. We feed the growing chick practically the same grain feed as the laying hen. Just now they are getting a mixture of wheat, oats and barley, and are doing nicely. When feeding growing pullets it is well to bear in mind the kind of food they will have as hens, and feed the same, or as near as possible. I have hens that were fond of oats and peas. Owing to the high prices of these two of late years the hens here will hardly eat oats, and never peas. They were not used to them while growing, and would only eat them when nothing else was available. Corn is one food that most hens are fond of, yet pullets that had not corn in their growing ration would not take readily to it when given later in life. Knowing this, practically the same feed is fed growing chicks they will eat later.

As a rule, the cockerels will be fed off before winter, but as most raisers are not so situated that it is convenient to separate them from the pullets, they get the same feed while running. The same feed is good for them, as it will most likely be used in fleshing them for market later.

KEEP CULLING.

As the flock is growing they should be culled out. Don't let the sickly birds get a chance to reach maturity. The raising of the chicks tell what the parent stock was, and as the future breeding stock depends upon what is being raised, it is highly important that none but the best reach the breeding pens. Not only is this necessary in our chicks intended for breeding, but in those intended for market. A chick with a poor constitution is no good anywhere, and to make the most out of our surplus stock this year we must have bred from good, vigorous laying stock. This being the case, it will pay us to cull continually. Whenever a poor chick is noticed, kill it. Don't risk it growing to maturity. The price of good vigorous stock is everlasting culling. The importance of this in market stuff will be seen when the cockerels go into feeding crates.

Macdonald College, Que. F. C. ELFORD.

(To be continued.)

New Poultry Rations at the Maine Station.

Editor "The Farmer's Advocate":

Bulletin 179, of the Maine Agricultural Experiment Station, is fresh from the press, and will be ready for distribution a little later. Its subject is Poultry Notes, and it treats of some changes in feeding, keeping poultry free from lice, and presents some studies on hybrid poultry.

It seemed advisable to make some changes before embarking on another long period of breeding work, and in 1908 Drs. Pearl and Surface, the authors of the bulletin, inaugurated the desired changes. "We have been so well pleased, on the whole, with these new feeds," they say, "that it is proposed to publish them at this time."

The litter now used consists of a mixture of dry pine shavings and straw spread on the floor, the shavings being about five to seven inches in depth, and covered with a thin layer of unbaled straw. This does not become damp so quickly as straw alone, and does not have to be changed oftener than once in three months.

The feed of all birds, whether pullets or not, embraces two essential parts, the whole or cracked grains scattered in the litter, and the mixture of dry ground grains, known as the dry mash. It is in the latter that a change has been made, together with a gradual rather than an abrupt transition from free range to winter quarters.

The old mash was 200 pounds wheat bran, 100 each of corn meal, middlings, gluten meal or brewers' grains, linseed meal and beef scrap. During the five years that this ration was fed, more or less trouble was experienced from liver troubles and indigestion. For the last two years, or since the change has been made, little difficulty has been noted from these causes, and the birds do not moult early in winter after a short spurt of egg production as heretofore.

The pullets are brought in from the free range early in September, and are given a restricted range in yards freshly seeded, untrampled and not burned out or dried out by the sun. After about two months of this restricted range the birds are finally shut up in the curtain-front houses for the winter.

The component parts of the mash vary from month to month, the idea being to bring them gradually up to a rich ration.

The following directions are taken from the bulletin:

COMPOSITION OF THE DRY MASH FED TO LAYING PULLETS.

First month in the laying house (September)—Bran, 300 pounds; 100 pounds each corn meal, middlings and meat scrap. Second month (October)—Bran, 200 pounds; 100 pounds each corn meal, middlings, gluten meal and meat scrap.

Beginning with November, 50 pounds of linseed meal is added to the ration of the second month, every other month; the alternate months it is used as given. The mash is kept before the birds all the time in the open hoppers that have been used at the station so long.

The advantages which it is believed have resulted from this method of feeding are, the authors say, twofold; the good effect on the vitality of the birds and its effect on the evenness of egg production during the winter months, scarcely a pullet having moulted during the two seasons it has been used.

From the work of the Station it was shown that the egg production of 300 Barred Plymouth Rock pullets during November, 1909, was slightly less than that of the eight-year period preceding the change; but, on the other hand, it was more during December, rising rapidly at just the time of year when a high egg production is most desired.

FEEDING THE HENS, COCKERELS AND COCKS KEPT OVER THE WINTER FOR BREEDING PURPOSES.

From observation and the study of literature upon the subject, the compilers of the recent bulletin have been led to the opinion that to get the best results in respect to the fertility and hatching quality of eggs, the birds used as breeders should not be fed the heavy-laying ration used to force egg production during the winter months, as it is feared that such food has a tendency to reduce or impair the fertility and hatching quality of the eggs.

"The aim is," say the authors, "to keep these birds on as light a ration as is consistent with the maintenance of good condition until just before the beginning of the breeding season, when they are to be used, and then to put them on a more stimulating and richer ration." The same scratch food used for the pullets is given them, unless the tendency of the yearling hens is to get unduly fat, in which case the mixture of wheat and oats is given at both litter feedings. The dry mash used is composed as follows:—Bran, 400 pounds; corn meal and middlings, 50 pounds each, and meat scrap, 100 pounds.

Birds completing their pullet year that are to be used as breeders are fed the pullet ration until they have finished their fall moult; when well

feathered out they are put on the above dry mash and fed it until about a month before the breeding season, when they are quickly worked up to the regular laying ration given the third month of the pullet year, with perhaps the addition of a little more beef scrap, which quickly brings the old hens into laying condition.

Concerning the success of the method the bulletin says: "It has been the experience here that this method of feeding breeders appears to help towards good fertility and hatching quality of the eggs and vigor of the chicks. Usually when fed and managed this way the old hens do not lay at all during the fall and winter months."

MARY B. AIKEN.

Poultry Droppings.

It is a fact that we don't value hen manure on the farm as we should. Poultry manure is specially valuable for the garden, and even a delicate woman can so care for it as to give the best results as a fertilizer, to the benefit of the fowls and the flowers as well. She need not exclaim, as did one well-to-do lady gardener, "All I want for a birthday present is a load of well-rotted manure," but may have a compost heap with feed for flowers and plants in abundance.

To start the heap, make a bed of loam on a well-drained spot, and throw on this the droppings from the poultry yard, carcasses of dead chicks, any refuse animal or vegetable matter, covering such additions with loam. Wash-day suds should be thrown over the mass each week. Two heaps should be in a secluded place on every farm. It takes about a year for a compost heap to be well ripened, and no new substance should be thrown on a ripened heap. Before using, shovel the mass thoroughly from top to bottom. Sufficient loam should always be thrown over the droppings to absorb the odors and retain the fertilizing elements. Fresh droppings should never be used about plants or flowers.

Feed the Flock.

Do not cut down on the feed because the old grain is about gone, and the new not threshed. Cull out the weaklings, the lanky birds, the narrow, pinched breast, and the long-headed, snaky birds from the young stock; cull out the old hens, the surplus cocks, and the birds that are always getting colds; but the chickens that are worth keeping are worth keeping well, and stinting on the feed at this stage means stunting the flock. It is better to keep half the number of well-fed chickens than twice the number half fed. We believe that the extra quality of show birds is often due to the feed rather than to the blood. Eggs from the same pen, and of as nearly as possible the same quality in every way, will turn out entirely different birds at maturity, largely because one breeder feeds a growing ration, all the birds will eat, of the right kinds of food; another breeder will feed all the birds will eat, but his ration is not well balanced, the birds are overfed with some elements and underfed with others; while a third breeder may underfeed and produce birds not much better than runts. There is no better market for feed than good stock.

THE FARM BULLETIN

Lincoln County Annual Picnic.

The Lincoln County Farmers' Institute held its annual picnic August 11th, at Victoria Park. This park is unusually well adapted for such a purpose, since it adjoins the Ontario Horticultural Experiment Station, Jordan Harbor, Ont., and also lies adjacent to a well-equipped and thoroughly modern public school. The people were particularly fortunate in having on their programme Mr. Putnam, Superintendent of Farmers' Institutes; Mr. Hodgetts, Director of the Fruit Branch, Department of Agriculture, Toronto; Professor B. S. Pickett, of the New Hampshire Experiment Station; Professor Soule, Director of the Experiment Station, Athens, Georgia, and Professor Crow, of the Ontario Agricultural College, Guelph. A very profitable and enjoyable day was spent by the many present.

The annual report of the Canadian Forestry Association for the current year (1910) has just been issued, and is now being mailed to members of the Association. In addition to a report of the business meeting of the Association, a full report of the convention held in Fredericton, N. B., in February last, is contained in the volume. All papers read are given in full, and much of the same discussion, as well. Much valuable information is contained in regard to the protection of the forest from fire, the wood-pulp industry, the education of professional foresters or forest engineers, and many other aspects of forestry, especially in Eastern Canada. Requests for copies of the report should be addressed to James Lawler, Secretary Canadian Forestry Association, Ottawa, Ont.

Dominion Crop Report for July.

The Dominion Census Bulletin, dated August 12th, shows that the conditions of field crops in Canada this year have been greatly modified by temperature and rainfall, and that between the East and the West it is hardly possible to make a statement of averages that will not be misleading. In the Eastern Provinces growth has been uniformly good throughout July, and the percentages of condition have been high for every crop; but in extensive tracts of the Northwest Provinces the crops are reported in every stage of condition. The northerly parts of these Provinces have been largely exempt from the drouth, and there the percentage conditions are high. It is difficult to indicate fairly an average of conditions for the East and West which does not take account of the areas sown, and these have been considerably reduced since the June report. The August report will give revised figures, from which yields may be estimated.

In comparing the per-cent. condition of crops for 1909 and 1910, it should be remembered that fall wheat, rye, peas, buckwheat, mixed grains, beans, potatoes, hay and clover and corn are principally produced in the Eastern Provinces, and spring wheat and flax mostly in the Northwestern Provinces, with oats and barley in nearly equal proportions in the two regions.

Fall wheat is grown chiefly in Ontario, and its condition for all Canada has been reduced by a relatively poor crop in Alberta. Compared with the condition at the same time last year, it is 84.63 to 76.53. Rye is 85.20 in 1910 to 81.84 in 1909; peas is 81.70 to 87; buckwheat, 87.64 to 86.15; mixed grains, 99.91 to 87.23; beans, 84.43 to 84.33; potatoes, 81 to 92; hay and clover, 90.87 to 73.79; corn for husking, 84.30 to 82.86; and corn for fodder, 89.76 to 83. These crops, which are mainly grown in the East, show a high average of condition, affected only in a slight degree by reports for the West.

The average condition of spring wheat is 77 for 1910 to 84.57 for 1909, and of oats, 79.57 to 87.78 for all Canada, which is substantially lower than the averages for the East. In the three Northwest Provinces the condition of spring wheat is 62; of oats, 58.62, and of barley, 63.60.

The estimated yield of fall wheat in the country is 18,724,000 bushels, being 26.47 bushels per acre. The hay and clover crop is estimated at 15,490,000 tons, or 1.80 tons per acre; and of alfalfa, 1.92 tons per acre.

Farmers' Institute Tent at Toronto Exhibition.

The Ontario Department of Agriculture will, as usual, have a tent on the Canadian National Exhibition grounds this year. It will be located in the vicinity of the stock barns, and near the Women's Building.

The Institute Branch is arranging for a convention of Farmers' Institute officers and workers, as well as Farmers' Club officers, to be held at the time of the Provincial Horticultural Exhibition, during the week beginning November 14th, 1910. No meetings are, therefore, being arranged for representatives of Institutes at the time of the Canadian National Exhibition.

The provisional lists for the winter series of meetings will be in readiness at the time of the exhibition, and the Superintendent will be glad to meet with officers and members to consider any changes desired in these lists.

Applications will also be received at that time for special meetings to be held during the winter, such as Fruit Institutes, Short Courses in Live Stock and Seed Judging, Poultry Meetings, etc.

Women's Institute officers will also be made welcome at the tent, and a representative of the Department will be pleased to arrange with them for lady delegates to next winter's series of meetings.

GEO. A. PUTNAM,
Superintendent of Institutes.

Nova Scotia Crop Report for July.

M. Cumming, Secretary of Agriculture for Nova Scotia, in reporting the condition of the crops in that Province for July, says: Hay crop immense, grain, potatoes, roots, excellent; pastures never better; live stock flourishing; but fruit a dismal failure. In more detail, the hay crop is almost as good as last year, and runs about 120 per cent. of a normal crop; oats is 105 per cent. of normal, and 2 per cent. less than last year; potatoes are an average crop; roots are 10 per cent. above the average, as is also corn and other forage crops. There is about 5 per cent. increase in dairy cattle, 1 per cent. decrease in beef cattle, and sheep still continue to decrease, this year's decrease being about 3 per cent., for which the cur-dog is largely blamed. The fruit crop is suffering the most signal failure since it became of commercial importance. Apples will not be more than one-quarter to one-third of what it was last year. Of what there is, the quality promises to be poor. Pears, plums and other fruit are light.

Occupations in Canada.

The Census Bureau has recently published a bulletin showing the occupations of the people, as based on the census of 1901. The four largest occupations employ the following numbers: Agriculture, 716,937; manufacturing, 389,873; domestic, 277,755; transportation, 234,236. Besides these the professional class numbered 94,639; mining employed 36,908; the fisheries gave work to 25,054; the forest and lumber industry employed 17,113, and a miscellany of occupations engaged 4,413. The bulletin shows those employed under two heads, "with wages" and "with and without wages." The latter represent 1,796,928—1,558,180 males and 238,748 females, including all who are employed in domestic or other duties without stated pay. Those "with wages" number 814,930—661,485 being men and 153,445 women. The occupations are divided again into producing and non-producing classes. The former include agriculture, fisheries, forestry and lumbering, manufacturing and mining. Domestic, professional, trades, and transportation and miscellaneous, along with military men and students, are classed as non-producers, because, while they labor, their service yields no article for sale in the market. The occupations entitled "Domestic and personal" include these headings: Laborers, all domestics, hotel and saloon keepers, bartenders, barbers, laundry employees, nurses, policemen, watchmen, etc. The professional class, in addition to doctors, lawyers, clergymen and engineers, takes in actors and theatrical employees, professors, teachers (of whom there are 8,596 men, 23,208 women), electricians, civil servants, stenographers and typewriters.

Coming Show Dates.

Edmonton, August 23rd to 26th.
Sherbrooke, Que., Aug. 27th to Sept. 3rd.
Canadian National Exhibition, Toronto, August 27th to September 12th.
St. John, N. B., Dominion Exhibition, Sept. 5th to 15th.
London, September 9th to 17th.
Ottawa, September 9th to 17th.
Charlottetown, P. E. I., Sept. 20th to 24th.
Victoria, B. C., Sept. 26th to October 1st.
Halifax, N. S., Sept. 28th to Oct. 6th.
New Westminster, B. C., Oct. 4th to 8th.
National Dairy Show, Chicago, Oct. 20th to 29th.
Maritime Winter Fair, Amherst, N. S., December 5th to 8th.
Smithfield Club Show, London, Eng., Dec. 5th to 9th.
Ontario Winter Fair, Guelph, Dec. 5th to 9th.
Toronto Fat-stock Show, Union Yards, December 12th and 13th.

A Guide in Plant Study for Boys and Girls.

The Canadian Seed-growers' Association, Ottawa, Ontario, has recently issued a very useful pamphlet on the growing of oats. The pamphlet is designed to serve as a guide for teachers in public schools who are endeavoring to teach some of the valuable essentials of agriculture. While designed for the children's use, it is to be hoped, however, that those who have left their school-days behind them will send for a copy of it, and find something of practical value in its pages. Though the circular is prepared specifically for oat-growing, yet since the principles are practically the same, it may be used in a study and improvement of other grain crops. In it is presented the essential qualities of desirable and undesirable types of oats, how to select, the valuable factors in seed and preparation of the soil. It presents plans for planting and selecting seed for three years of selection for seed improvement. It also contains comprehensive and suggestive outlines of work for the teacher. This pamphlet should be in every home and in every rural school; many teachers can make use of its suggestions, and every home should do so.

Where Are the Profits?

Editor "The Farmer's Advocate":

I have received in book form an open letter that appeared in your paper on June 23rd, addressed to His Honorable the Minister of Agriculture, from Mr. Flavell, inquiring why farm products are so dear. The question almost answers itself. 'Tis the cost of production. If there are people who think farmers are getting rich too fast, they should just get themselves a little farm and be right in the game too. Chances were never better to start farming than at the present time. There are farms around here that have been idle this year. Their owners went West in the spring, were unable to rent or sell, so just left them, and it would be nice if some good smart fellow would take hold of one of these places, that the neighborhood might benefit by his intelligence. Many people went West in the spring, and many more will have to go when the sale notes become due. Prices are high, but not confined to farm products alone. Hogs are dear, but how would they be if we were raising them? This is what nearly every

Canada.

published a bul- the people, as the four largest numbers: Agri- 389,873; do- 234,236. Be- bered 94,639; ries gave work r industry em- of occupations ows those em- es" and "with present 1,796, 8 females, in- omestic or other "with wages" a and 153,445 ed again into s. The former y and lumber- omestic, profes- and miscellane- students, are hile they labor, r sale in the "Domestic and Laborers, all rs, bartenders, es, policemen, class, in addi- and engineers, loyees, profes- 596 men, 23- vants, stenog-

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farmer says, and claims there is more money in selling five hogs at 10c. a pound than ten at 5c., and is satisfied with the way he is doing, some claiming they nearly lost their farm three years ago by having too many, and are slow to forget it; but if meat has been high all around the board, the consumer shouldn't kick too hard—he has been getting his potatoes thrown in on the deal. Now let us size up the grain for a moment. We will roughly figure out what it costs to grow an acre of fall wheat. I always consider it the best acre I have on the farm, and I will give you what I figure it costs me to produce it. We will take the summer-fallow; it seems the surest and the best:

Plowing twice, man and team, at \$4 per day	5.30
Cultivating and seeding	5.30
Manuring and picking off the rolling stones	5.40
Interest on investment for two years, at 5 per cent., land worth \$40 per acre	4.00
Taxes for two years, at 12 mills on the \$	1.00
Seed, two bushels to acre	2.00
Harvesting and twine	1.50
Threshing, say the yield is 30 bushels to acre, at 7c. per bushel	2.00
Marketing and getting home with the money	1.50
What it costs me to grow an acre of wheat	\$28.00

Perhaps you will think my figures high, and they do seem that way, but for the life of me I can't see where I made the mistake, and I really hope I have, so we will just size it up all down the line. I pay a man \$1.50 per day. He is a good man, and a hearty fellow, and can easily eat and sleep 50c. worth every day, making it the even \$2.00. I don't count any profit on the man; I just keep him because I can't manage alone. The horses, too, are good feeders. I put them at 25c. each for the run of their teeth; then I have about \$450 invested in these horses, so I don't think I would be unreasonable in asking them to earn me 50c. a day each clear, when we consider the fact that he stands in the stable for four or five months each year, eats his little 20c. worth each day, and gives no return. I don't know how old he would be when he is square on his master's book, but would judge he would have a full mouth, and during that period has missed a lot of opportunities of turning up his toes and leaving his owner in the hole, that many another horse has taken advantage of. The price of my man and team is \$4 per day, and I expect them to plow 1 1/2 acres each day. It will then take two men and one team a day to manure the ground well enough to grow 30 bushels of wheat. If I cultivate this land as they told me at the Institute, I am quite sure it will cost me as much as to plow the ground twice. I don't think interest and taxes out of the way; it is the rate we pay here, and I don't think I am assessing wheat land too high at \$40 per acre. The harvesting, I figured that two men would cut 10 acres in a day (we will not count on the extra horse for the binder); then we will give the same two fellows a day to store it in the barn, and if we are going to have 300 bushels off that field they will have to move, as well as making use of either the boss or the chore boy to help them unload, but they don't count either. The threshing is a guess, but am inclined to think it a low one. Now for the marketing, that is the fun, an eight-mile haul. I figured this at 60 bushels to the load, or two acres a trip, but I didn't count quite a day's pay. By the time I get my load off I would be late for dinner at home; my neighbor is stopping for dinner, so I conclude to do the same. There is local option up here, and high rates, 40c. a meal, or two for 75c. (it pays to take your wife, so as to get the worth of your money); 30c. for your horse's hay, and I don't like to take it with me; then the hostler wants a tip, and he usually gets it. This is not your only expense, for you meet

with company that you haven't seen since the fall fair, nearly a year ago, and it causes quite an effort to get home in time to help with the milking. We need not take oats in consideration, for the farmers were teaming them out this June for less than a cent a pound, so we are sure they would figure out worse than the wheat. Peas can't be successfully grown in many parts of Ontario on account of the bug, but they have it cooled this time, for a lot of them have ripened in the blossom. It is rather sad what has happened to the barley, and I don't care to speak about it, but we are not using it any more up here. I will not dwell on dairying; I am not much in love with it, for it has to be attended to every day in the week, and twice on Sunday, and I fear would conflict with my Sabbath duties, that I wouldn't have interfered with by a cow. I will not give you my figures on beef cattle, but if you will take the figures of the Experimental Stations of Canada and the States, we find the best they can offer us is a good market price for the feed consumed, and a heap of manure for your work, so the man with small capital can scarcely hope to beat that. So you see, Mr. Editor, I can't very gracefully exchange the fruits of my labor from this branch of farming for a Merry Widow hat and a new dress for my wife—I don't know the name of the dress, but I mean the kind that fits all the way down the back, just like the paper on the wall. Mr. Flavelle, in his letter, speaks of draining the land and growing larger yields. What better would the farmer be if he were growing more and taking a proportionate amount less for it? The farmer is not like the merchant that sets his price. This is very kindly attended to by a host of speculators, who sit watching the weather, and when kind Providence sends a glorious rain, that should be a blessing to the whole world (farmers included), these chaps charge it up to the farmer, and make him pay for it. They just trim the farmer out of his share of the blessing, for in taking their share they take the whole cheese. We have heard people speak of robbing the church. This is the nearest thing to it that I can think of just now. I wouldn't care to be at such work; would you? But they have an easy life, and I hope they won't have a hard death, and will not be rushed with too many things to think about all at once. We farmers have changed our methods quite a little this last few years. We used to grow all we could, and were paying it mostly out in expenses. At present we are producing less, with the lesser cost. This is affecting the supply, but not the farmer's finances in the least; keeping down the supply seems to be his only mode of defence. The best aid the Government could give the farmer that I know of, would be to loan him some cheap money, to permit him to hold his goods till he can turn them over at a small profit. It would be better than advertising the good prospects. It is quite a common thing to see on the market page that Government reports wheat wintered well, etc.; prices go off accordingly. It would have been rather a sorry Thanksgiving for the Ontario farmer had it not been for that hot, dry weather to put the price back where it belonged. It looked at one time that he would have to market his wheat this fall for about 80c. a bushel, or 20c. below the cost of growing it (according to my figures); that is, if you allow the farmer the same wage that he has to pay his help. I believe myself he should have about 15c. a day more, when he has all the capital invested, but if it is worth 10c. a day to be boss, I am sure he would be well satisfied if he was sure he was making five more. If the supply of produce is getting alarmingly low, the drop in the price of grain in June will make it still lower for another year; for if you spent an evening around the country post office and listened to the remarks, you would say so too. Such as, I am going to give up the idea of getting that field ready for wheat this fall; I can't plow more than an acre in a day, and am wearing out a

40c. point in doing that; there is no money in wheat at the present price. Another would say, I can get \$4 a day drawing gravel on the road in front of my place; I will try that for a while; if the ground is too hard when I am through with that, I will just run the mower over it, plow it in the fall when the ground is soft, sow some oats in the spring, and grow horses for my brothers in the West, and just leave the wheat to them, etc.; and on going through a portion of this district a short time ago, it was not hard to see that some of them put their ideas into practice, only in some cases had neglected cutting the thistles, and they were then standing nearly as high as the fences and in full bloom. They had by no means a thrifty appearance, but they had a nice smell, and may help the honey supply.

In some walks of life when a man gets too old for work he gets a pension; when a farmer gets too old he gets the poor house; but for all this it is good enough for me, but I do sometimes think there is not enough money in it, especially when our city friends visit us about August, with good clothes and money, not to burn, but to spend. I am not much for dress myself; my good clothes were new eleven years ago last October, when I became a married man, and they are just two-thirds worn out now. I would rather keep the rest of the family dressed, so that there would not be such a marked difference between our visitors and ourselves, and if I could get hold of a few of those mighty dollars that I could get along without, would be content to make a good fellow of myself, by flinging an occasional one at the collection plate Sunday afternoon during the holiday season. There is nothing like being hopeful. Next year I may hold a public office. I am going to apply to our council to be appointed poundkeeper, and if successful I am sure I will be able to pound enough of our neighbors little pigs and turkeys to buy my wife a whole new outfit, and am now looking forward for a trip to Toronto Fair a year from next fall, alongside of an up-to-date dressed lady, and I will venture to say that when her escort gets lost from her in the midway, you wouldn't be able to tell whether she is fresh in from the country or just over from Paris.

SIMCOE FARMER.

Dorchester Society Standing-crop Competition.

The standing crops in the Dorchester Society was judged by John Hamilton, Tupperville, Ont. The report of the awards shows that the farmers in this locality have excellent crops, and that they come pretty near being masters of their profession. This season has been somewhat unusual, and not entirely favorable, yet there were nine competitors that received eighty-nine points or better in the official scoring. Such success should be an encouragement towards still better things, and should produce an emulation on the part of their neighbors that will make for the advancement of their communities.

Of the first six in the list, five are subscribers to "The Farmer's Advocate."

The Dominion Dairy Branch at Toronto Fair.

The Dairy and Cold-storage Branch of the Dominion Department of Agriculture will have quarters in the Dairy Building at the Toronto Exhibition, where an information bureau will be maintained regarding cow-testing, cool-curing of cheese, and all questions pertaining to the dairy industry. Farmers, factory directors and makers will be cordially welcomed by those in charge.

GOSSIP.

H. Bollert, Cassel, Ont., advertises for sale in this issue, a young Holstein bull which should attract the attention of breeders and dairymen, as his dam, in her junior two-year-old form, gave 12,568 lbs. milk, and made 454 lbs. fat in the year, under ordinary herd care, and she transmits her producing qualities, since her first heifer, now two years old, is doing fully as well. They are also of beautiful form, with square, well-balanced udders.

PERCHERON IMPORTATIONS.

From July 11th to July 31st, 344 Percheron horses have been imported by members of the Percheron Society of America. Fifty of these were mares and fillies. The inspection at port of entry is working satisfactorily, and guarantees the accuracy of any certificates issued by the Percheron Society.

During the year ending June 30th, 1910, registrations were as follows:

American-bred stallions	2,550
American-bred mares	3,695
Total American-bred	6,245
Imported stallions	1,437
Imported mares	1,101
Total imported	2,538
Applications rejected or held up for further action by the Pedigree Committee	139
Grand total	8,922
Actual registrations	8,783

The Secretary estimates that there are about 24,000 living stallions and 16,000 living mares, or a total of 40,000 living Percherons, owned by members and breeders affiliated with the Percheron Society of America.

July 14th, the Society had a membership of 2,726. Since that time, 98 other breeders have become members of the Society, making a total of 2,824 members, or a gain of 98 members in about three weeks.

The Canadian Northwest is calling for good Percheron horses also, as is indicated by the fact that numerous shipments there have been made by American breeders, and an importation of 51 head of good Percherons was recently made by Canadian breeders. This went direct from France to Canada via New York.—Wayne Dinsmore, Secretary.

MARKETS.

Buffalo.

Cattle.—Prime steers, \$7.40 to \$7.75. Veals.—\$7 to \$10. Hogs.—Heavy, \$8.90 to \$9; mixed, \$9.10 to \$9.25; Yorkers, \$9.25 to \$9.65; pigs, \$9.50 to \$9.65; roughs, \$7.20 to \$7.35; stags, \$6 to \$6.75; dairies, \$9.75 to \$9.60. Sheep and Lambs.—A few wethers, \$7 to \$10; lambs, \$5.50 to \$7; yearlings, \$5.75 to \$6; wethers, \$5.10 to \$5.25; ewes, \$4.25 to \$4.75; sheep, mixed, \$3 to \$4.75.

Chicago.

Cattle.—Beeves, \$4.60 to \$8.25; Texas steers, \$3.50 to \$3.75; Western steers, \$4 to \$6.75; stockers and feeders, \$4 to \$6.25; cows and heifers, \$2.50 to \$6.40; calves, \$6.50 to \$8.55. Hogs.—Light, \$8.50 to \$9; mixed, \$7.90 to \$8.90; heavy, \$7.65 to \$8.55; rough, \$7.65 to \$7.85; bulk of sales, \$7.85 to \$8.50. Sheep and Lambs.—Native, \$2.25 to \$4.35; Western, \$2.50 to \$4.25; yearlings, \$4 to \$5.40; lambs, native, \$4.25 to \$6.75; Western, \$4.25 to \$6.60.

British Cattle Markets.

Owing to the continued influx of ranch and rough cattle into the English markets, prices have been steadily reduced, and considerable difficulty was experienced in the Birkenhead market to dispose of anything, bar the best cattle, prices realized being for Canadian steers from 13½c. to 14½c., and ranch steers from 12c. to 12½c. per lb.

HARVEST TIME

Should be a season of plentiful money for many of our people. We wish to remind all of the facilities of the

BANK OF TORONTO

for the safe deposit of spare money, and for conducting the banking business of farmers and other people.

Surplus money should be deposited in our Savings Department, where it will earn interest and where it will be SAFE until required for use.

Small or large amounts may be deposited or withdrawn at any time.

INCORPORATED 1855.

Toronto.

LIVE STOCK.

At West Toronto, on Monday, August 15th, receipts were 143 cars, comprising 2,959 cattle, 66 hogs, 560 sheep, 55 calves. Quality of cattle good; trade slow. Cattle prices, 15 cents to 25 cents per cwt. lower for butchers'; few exporters were sold; prices off 25 cents to 40 cents per cwt. Picked butchers', \$6; loads of good, \$5.25 to \$5.50; medium, \$5 to \$5.25; common, \$4 to \$4.75; cows, 10 cents to 15 cents per cwt. lower, at \$4 to \$4.75; and a few, \$5. Calves, firm, at \$3.50 to \$7.50. Sheep, ewes, \$4 to \$4.50; rams, \$3 to \$3.25; lambs, \$6 to \$6.60. Hogs, fed and watered, \$8.60, and \$8.25 to drovers, f. o. b. cars at country points. Milch cows, unchanged.

REVIEW OF LAST WEEK'S MARKETS
The total receipts of live stock at the City and Union Stock-yards for last week were as follows:

	City.	Union.	Total.
Cars	180	182	362
Cattle	2,755	3,329	6,084
Hogs	2,746	1,150	3,896
Sheep	3,278	578	3,856
Calves	574	157	731
Horses	6	100	106

The total receipts of live stock at the City and Union Yards for the corresponding week of 1909 were as follows:

	City.	Union.	Total.
Cars	183	102	285
Cattle	2,597	1,558	4,155
Hogs	2,826	842	3,668
Sheep	4,272	555	4,827
Calves	295	92	388
Horses	—	147	147

The above figures show a gain in the total receipts of live stock at the two markets for the present week, when compared with the corresponding week for 1909, of 77 carloads, 1,929 cattle, 228 hogs, 343 calves; but a decrease of 971 sheep and lambs, and 41 horses.

It will be seen that the receipts of live stock were larger than for the previous week. The quality of the cattle was about an average of what has been delivered for several weeks past. Trade, considering the week's receipts, was generally good, although prices were 10c. to 25c. per cwt. lower for export cattle.

Exporters.—Prices for export steers ranged from \$5.75 to \$6.70, but only five or six loads of extra quality brought the latter figure. The average price was about \$6.35, for London cattle; average for Liverpool cattle was \$5.80; export heifers, \$5.90 to \$6.10; export bulls, \$5 to \$5.50.

Butchers'.—Prime picked lots of butchers' sold at \$6.10 to \$6.25 per cwt.; good, \$5.75 to \$6; medium, \$5.25 to \$5.50; common, \$4.50 to \$4.80; cows, \$3 to \$5; canners, \$1.65 to \$2.50 per cwt.

Stockers and Feeders.—Receipts of stockers and feeders were light, and demand fairly good. Quite a number of farmers were on the outlook, and the

prospects are for a good demand. Feeders, 900 to 1,000 lbs., \$5 to \$5.25; steers, 800 to 900 lbs., \$4.50 to \$5; good quality stockers, 600 to 700 lbs., \$3.75 to \$4.25; common light stockers, \$3.25 to \$3.75.

Milkers and Springers.—Receipts moderate, demand good, and prices steady to firm, at \$35 to \$65, with one at \$70 and one at \$85 each.

Veal Calves.—Receipts of veal calves continued to be moderate, with prices firm, at \$3.50 to \$8 per cwt., the bulk selling at \$6.50 to \$7.50 per cwt.

Sheep and Lambs.—Receipts were liberal and prices easy for lambs; sheep, about steady. Sheep—Ewes, \$4 to \$4.40; rams, \$3 to \$3.25; lambs sold from \$5.75 to \$6.50, or an average of \$6.25 per cwt.

Hogs.—The general run of prices for hogs during the week was \$8.75 for selects, fed and watered, and \$8.40 to drovers, for hogs f. o. b. cars at country points, but 10c. per cwt. above this was paid in a few instances.

Horses.—There was little doing on the horse market at the Union Horse Exchange last week, and the trade presented no new features. Receipts for the week were about 100 horses. There was no demand from the Northwest, but the local demand for a mixed class, or, in other words, horses of all classes, was fairly good. Manager Smith reports having sold several pairs of top-notch drafters, weighing over 1,700 lbs. each, at \$600, and one horse in this class at \$315. The general prices ruled as follows: Drafters, \$200 to \$230; general-purpose horses, \$175 to \$225; expressers, \$160 to \$225; drivers, \$100 to \$250; serviceably sound, \$35 to \$80 each.

BREADSTUFFS.

Wheat.—Old No. 2 winter, \$1.06 to \$1.08; new, 98c. to \$1. Manitoba wheat—No. 1 northern, \$1.15; No. 2 northern, \$1.10, on track, lake ports. Rye—No. 2, 68c. Peas—No. 2, 69c. to 70c. Buckwheat—No. 2, 50c. to 51c., outside. Barley—No. 2, 52c. to 53c.; No. 3X, 50c. to 51c.; No. 3, 45c. to 47c., outside. Oats—Canadian Western oats, No. 2, 42c.; No. 3, 41c., lake ports; Ontario oats, No. 2, 39c. to 40c., outside. Corn—No. 2 yellow, 67c.; No. 3, 66c., at Midland; No. 2 yellow, 72c.; No. 3 yellow, 71c., all rail, Toronto. Flour—Ontario, new wheat flour for export, \$3.75, outside, car lots, buyers' bags. Manitoba flour—Toronto prices: First patents, \$6.20; second patents, \$5.70; strong bakers', \$5.50.

HAY AND MILLFEED.

Hay.—Baled, in car lots, new No. 1, \$14 to \$15; No. 2, \$13 per ton, track, Toronto.

Straw.—Baled, in car lots, track, Toronto, \$7 to \$7.50.

Bran.—Manitoba bran, \$20 per ton; shorts, \$21 to \$22 per ton, Toronto. Ontario bran, in bags, \$20; shorts, 50c. to \$1 per ton more.

COUNTRY PRODUCE.

Butter.—The market for butter was slightly firmer. Creamery pound rolls, 24c. to 25c.; separator dairy, 22c. to 23c.; creamery solids, 23c. to 24c.; store lots, 20c. to 21c.

Eggs.—Receipts continued to be fairly large, with prices unchanged, at 20c.

Honey.—The first receipts of new honey came on the market last week, and sold at 10c. to 11c. for extracted, and \$2.25 to \$2.75 per dozen for combs.

Cheese.—New cheese was plentiful, at 11c. for large, and 12c. for twins.

Potatoes.—No car lots of new offered. Farmers and market-gardeners selling new by the wagon load at 75c. to 90c. per bushel.

Beans.—Dealers report trade as being light, with stocks low and prices firm, but unchanged, at \$2 to \$2.10 per bushel for primes, and \$2.15 to \$2.25 for hand-picked.

Poultry.—Receipts continued light. Spring chickens, 16c. per lb. alive; ducks, 10c. to 12c. per lb. alive; hens, 12c. per lb. alive. Pigeons, \$1.25 per dozen.

HIDES AND WOOL.

E. T. Carter & Co., 85 East Front street, have been paying the following prices: No. 1 inspected steers and cows, 94c.; No. 2 inspected steers and cows, 84c.; No. 3 inspected steers, cows and bulls, 74c.; country hides, 8c. to \$1; calf skins, 11c. to 13c.; horse hides, No. 1, \$2.75, horse hair, per lb., 39c.; tallow, per lb., 5c. to 6c.; lamb skins, 39c.

to 35c.; wool, unwashed, 13c. to 14c.; wool, washed, 18c. to 20c.; wool, rejections, 15c.

FRUITS AND VEGETABLES.

Receipts of Canadian fruits were larger than for any week this season; that is, there was a larger variety. Apples, per basket, 25c. to 35c.; blueberries, basket, \$1 to \$1.25; cherries, \$1 to \$1.25; currants, black, \$1.25 to \$1.50; currants, red, 80c. to \$1; gooseberries, crate, 75c.; Lawton berries, box, 11c.; peaches, Ontario, basket, 50c.; pears, 35c. basket; watermelons, 35c. to 40c. each; beans, basket, 20c. to 25c.; beets, dozen, 20c. to 25c.; cabbage, crate, \$1.25 to \$1.50; carrots, dozen, 30c.; celery, basket, 25c.; cucumbers, basket, 25c.; sugar corn, 17c. per dozen; eggplant, basket, \$1; green peas, basket, 35c.; onions, crate, \$2.50 to \$2.75; peppers, 40c. to 50c.; tomatoes, basket, 35c. to 50c.

Montreal.

Live Stock.—Exports from the port of Montreal during the first week of August were 3,140 head of cattle, against 3,342 the previous week. Choice Ontario cattle were scarce on the local market, but there were quite a few Northwest ranchers of medium quality. Exporters were not taking anything, and butchers were not anxious, so that trade was dull. Choice steers sold at 6c. to 6 1/2c. per lb., fine at 5 1/2c., good at 5c. to 5 1/2c., medium at 4 1/2c. to 5c., and common down to 4c. Good cows brought 5c., and common 3c., while bulls sold at 3 1/2c. per lb., for best. There was a good demand for sheep for export, and supplies were limited; prices were higher, at 4c. for picked lots, culls selling to butchers at 3 1/2c. to 3 3/4c. per lb. The market for lambs was steady, under a good demand, at 3 1/2c. to 5 1/2c. per lb. There were very few calves offered and prices ranged from \$3 to \$5 each for common, and \$5 to \$12 for choice. The offering of hogs was rather lighter, but the market was easy, and prices ranged from 9 1/2c. to 9 3/4c. per lb. for selects.

Horses.—The market remains on the dull side, and dealers are not handling a great number of animals. Demand has been dull, although here and there appears a demand for farming animals, the difficulty being to obtain a sufficient supply. Notwithstanding the scarcity of stock, there has been much opposition to an advance in prices, which were as follows: Heavy draft animals, weighing from 1,500 to 1,700 lbs., \$275 to \$350 each; light draft, 1,400 to 1,500 lbs., \$225 to \$275; light horses, 1,000 to 1,100 lbs., \$100 to \$175; inferior animals, \$50 to \$100 each, and fine saddle or carriage animals, \$350 to \$500 each.

Dressed Hogs and Provisions.—The market for dressed hogs showed an easier tone, and prices were fractionally lower than a week ago. Fresh-killed, abattoir-dressed hogs sold at 13 1/2c. to 13 3/4c. per lb. Bacon was steady, at 20 1/2c. per lb. for English, boneless, selected; 20c. for boneless, thick; 22c. for Windsor skinned backs; 18c. for spiced roll, short, boneless, and 19c. for Wiltshire sides. Extra large hams, 25 lbs. and more, 17c.; large, 18 to 25 lbs., 18c.; medium, selects, 13 to 18 lbs., 20c.; extra small sizes, 10 to 13 lbs., 21c.; bone out, rolled, 19c. to 21c. per lb., according to size. Barrelled pork ranges from \$24 per barrel to \$31, and lard from 12 1/2c. to 14c. for compound, and 15 1/2c. to 16 1/2c. for pure.

Potatoes.—Only new Canadian potatoes wanted or to be had, and prices of these were showing very little change, although gradually becoming lower. Prices were around \$2 per barrel, and half that price per bag of 80 to 85 lbs. Some days the market has been rather higher, and others rather lower.

Eggs.—The market for eggs has been steady in the country, dealers having paid 16c. to 16 1/2c. per dozen for straight-gathered, and sold them here at about 18c., No. 1 candled being 19c., and selects 23c., and new-laid 25c.

Honey.—Prices have been unchanged, at 11c. to 15c. per lb. for white clover comb, extracted being 10 1/2c. to 11c., while dark comb was 11 1/2c. to 12 1/2c., and extracted 7c. to 7 1/2c.

Butter.—Best Quebec creamery could be had at 22 1/2c., and fancy Townships at 22 1/2c. Other qualities were fractionally less. The demand from England, although light, is fully up to a year ago, ships

The Canadian Bank of Commerce

affords to farmers and others every facility for the transaction of their banking business.

Accounts may be opened by mail and moneys deposited or withdrawn in this way with equal facility.

SALES NOTES will be cashed or taken for collection.

Branches throughout Canada, including Toronto, Hamilton, Montreal, Charlottetown, New Glasgow, and Truro.

ments of butter from the port of Montreal, from the first of the season to the present, amounting to 10,600 packages, against 10,900 for the corresponding period of 1909. On Monday, 15th, prices were 1/4c up all round.

Cheese.—The market for cheese has held unusually steady, there being hardly any change for a long time past. Prices were just about 1/4c. down, at 10 1/2c. to 10 3/4c. per lb. for Quebecs and Townships, and 11c. to 11 1/2c. for Ontarios, colored bringing 11 1/2c. A further decline of 1/4c. to 1/2c. was registered on Monday, 10 1/2c. to 11c. covering all makes. Exports from Montreal to date are 815,000 boxes, as against 851,000 for the corresponding period of 1909.

Grain.—The market for oats has shown a stronger tone, and prices advanced to 42c. and 42 1/2c. per bushel for No. 2 Canadian Western, No. 3 being 40c. to 41c. No. 1 barley sold at 53c. to 54c., while No. 4 brought 49c. to 50c.

Flour.—Demand has been good, but there has been no change in price, Manitoba No. 1 patents being \$6.30 per barrel, in bags, seconds being \$5.80, and strong bakers' \$5.60. Ontario winter wheat patents sold at \$5.50 per barrel, and straight rollers at \$5.25.

Feed.—There was a good demand for feed, especially for bran, and prices were firm, at \$20 per ton, in bags, for Manitoba bran, and \$22 for shorts, Ontario bran being \$20.50 to \$21, middlings \$22, pure grain mouille \$33 to \$34, mixed mouille \$26 to \$29, cotton-seed meal \$27.

Hay.—Prices have remained steady, at \$14.50 to \$15 per ton for No. 1 hay; \$13.50 to \$14 for No. 2 extra, and \$12 to \$12.50 for No. 2, clover mixed being \$10.50 to \$11, and clover \$9 to \$10.

Hides.—The market for hides has been dull and steady, prices being as follows: Uninspected hides, 8c. per lb., No. 3 being 8c., No. 2 being 9c. and No. 1 being 10c., while No. 2 calf skins were 12c., and No. 1 14c. per lb. Lamb skins were 30c. each, and horse hides \$1.75 for No. 2 and \$2.50 for No. 1. Tallow sold at 1 1/2c. to 5c. per lb. for rough and 5c. to 6c. for rendered.

Cheese Markets.

Madoc, Ont., 10 11-16c. Stirling, Ont., 10 1/2c. Brockville, Ont., 10 1/2c. bid. Belleville, Ont., 10 1/2c. and 10 9-16c. Van-Kleek Hill, Ont., white, 10 9-16c.; colored, 10 1/2c. Kingston, Ont., 10 1/2c. Russell, Ont., 10 1/2c. Alexandria, Ont., 10 9-16c. Winchester, Ont., 10 1/2c. for white, and 10 9-16c. bid for colored. Ottawa, Ont., white, 10 9-16c.; colored, 10 1/2c. Listowel, Ont., 10 1/2c. bid. Napanee, Ont., 10 1/2c. and 10 1/2c. Picton, Ont., 10 11-16c., 10 1/2c. and 10 13-16c. Iroquois, Ont., 10 9-16c. Perth, Ont., white, 10 1/2c.; colored, 10 1/2c. London, Ont., 10 1/2c. St. Hyacinthe, Que., 10 1/2c. Kempsville, Ont., 10 1/2c. and 10 11-16c. Cowansville, Que., 10 1/2c. Chicago, Ill., daisies, 16c.; twins, 15c. to 15 1/2c.; young Americans, 16c.; longhorns, 16c.

"Seventy-five dollars cash—not a cent less!" thundered the farmer.

"Seventy-five dollars?" repeated the automobilist. "Do you think it was a cow I ran over?"

"No, it wasn't a cow," said the farmer, "it was a hen, and a layin' hen at that."

Dates of Ontario Agricultural Societies' Fairs, 1910.

Table listing dates for agricultural societies' fairs across various Ontario locations from August to October 1910.

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GOSSIP.

The British Dairy Shorthorn Association has now 130 members, or nearly thrice the number at the outset of its career.

At a council meeting of the Clydesdale Horse Society of Great Britain, it was agreed that the Cawdor-cup competitions should take place in 1911, as during the present year, namely, that for males at the Scottish Stallion Show at Glasgow, and that for females at the Highland Show, which next year will take place at Inverness.

Shipments of Clydesdales from Glasgow in the last week in July totalled 120 head, chiefly for Canada, among which were 10 for Robert Ness & Son, Howick, Que.; 16 for Vanston & Rodgers, Wawanesa, Man.; 10 for John Semple, Milverton, Ont.; 41 for Robert Sinton, Regina, Sask.; 10 for John A. Boag, Queensville, Ont.; 6 for Alex. F. Niven, St. Thomas, Ont., and 15 for Peter Horn, Regina. Other shipments were made to New Zealand and the Argentine.

Official records of 130 Holstein-Friesian cows have been accepted by the American Holstein Association, from June 16th to July 2nd, 1910. This herd of 130 animals, of which nearly one-half were heifers with first or second calves, produced in seven consecutive days, 51,973.2 lbs. of milk containing 1,770.316 lbs. of butter-fat; thus showing an average of 3.41 per cent. fat. The average production for each animal was 399.8 lbs. of milk, containing 13.618 lbs. of butter-fat; equivalent to 57.1 lbs. or nearly 28 quarts of milk per day, and 15.9 lbs. of the best commercial butter per week. The averages are unusually large for the time of year; but it is evident that the warm summer weather has affected many of the tests reported, and thus had an influence upon the averages.

During the big storm of July 28th, one of the quarantine sheds at South Quebec was struck by lightning and took fire. Chas. Begin, who was in the vicinity at the time, received a severe shock, he and his horse being thrown to the ground. On recovering, he hastened to inform Mr. Walsh, the manager of the quarantine station, who, aided by Mr. Begin, formed a voluntary fire brigade, which extinguished the flames, but not before five sheep belonging to Geo. Allen and W. G. Arkell, of Ontario, had perished. Mr. Begin was presented, by the stockmen interested, with a purse of gold, in recognition of his presence of mind in giving the alarm, though dazed by the electric shock, thus saving thousands of dollars' worth of property and sheep in the quarantine.

BOOK REVIEW.

HISTORY OF HEREFORD CATTLE.

Breeders of the old and stately white-faced cattle of Herefordshire, England, and all stockmen who would have their libraries enriched by the lore of other breeds than those in which they may be personally identified, will appreciate the privilege of securing a revised and very substantial edition of the work, by James MacDonald, Secretary of the Highland and Agricultural Society of Scotland, and James Sinclair, editor of the English Live-stock Journal. These names, with those of the publishers, Vinton & Co., are a sufficient guarantee of the excellence of the volume, which is copiously and beautifully illustrated with portraits of breeders and cattle of eminence. Naturally, the book includes an interesting chapter on the Hereford breed in Canada and the United States. The price of the book is \$5.50, and copies may be ordered through this office.

TRADE TOPIC.

The Massey-Harris Co., Ltd., are announcing in this issue, corn-harvesting machinery, ensilage cutters, etc. Those of our readers who are interested would do well to look up the advertisement and write the nearest Branch House for catalogue.

Mrs. Homebody—Why did you send your husband's coat to the tailor when all it needed was a button?

Mrs. Outley—Well, the fact is, my husband married so young he never learned how to sew on buttons.

Bank Commerce

opened by mail... with equal

will be cashed on.

out Canada, in Hamilton, Mont- New Glasgow,

the port of Mont- the season to the 10,600 packages, the corresponding Monday, 15th, prices

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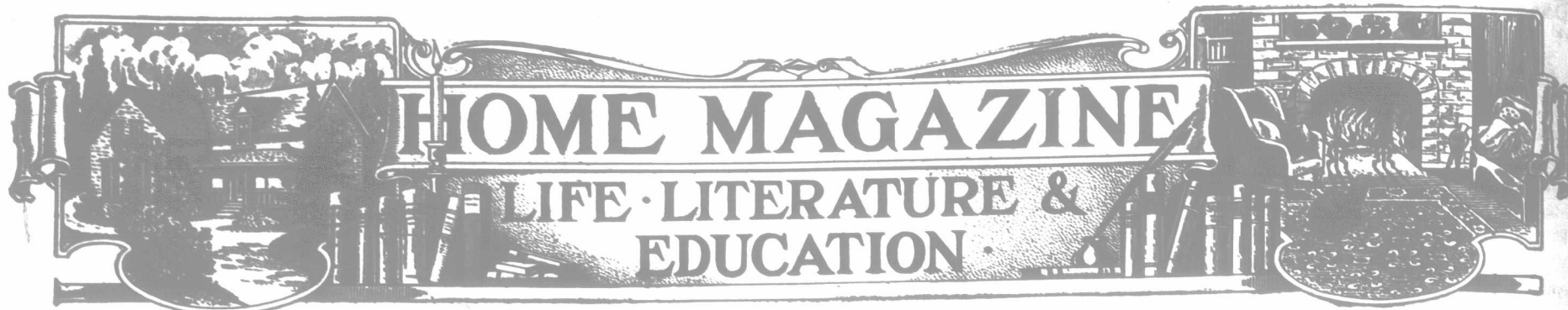
for hides has been a being as follows: per lb., No. 3 be- and No. 1 being f skins were 12c.

Lamb skins were hides \$1.75 for No. Tallow sold at rough and 5c. to

Markets.

11-16c. Stirling, e, Ont., 10c. bid. and 10 9-16c. Van- 10 9-16c.; colored, 10c. Russell, ia, Ont., 10 9-16c. 1c. for white, and ed. Ottawa, 10c. Listo- red, 10c. Napanee, Ont., on, Ont., 10 11-16c. Iroquois, 10c. Ont., white, 10c. St. on, Ont., 10c. St. Kemptville, Ont., Cowansville, Que., daisies, 16c.; twins, Americans, 16c.

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Dogmatism.

It may almost be taken as an axiom that willingness to inquire into all sides of a question before coming to a decision or pronouncing definitely upon it, is an infallible sign of a great mind. The man of narrow mind is likely to be swayed by prejudice or impulse. He jumps at conclusions. He it is who is likely to talk on and on, silencing his opponents by mere volume of words, bulldozing his way, often, by a positiveness which might speedily give way were he willing to consider the views of others and realize that some sense and reason may emanate from brains other than his own. As a result, the dogmatic man is seldom a favorite, and he often becomes even his own worst enemy, losing often where he might have gained, had he been more liberal and contemplative.

There is truly "a time to every purpose under the heaven"—"a time to weep and a time to laugh; a time to get and a time to loose; a time to keep and a time to cast away"—and this last applies to opinions as to other things. There is surely a time to be positive, but there is quite as surely a time to wait and question and ponder before committing one's self by action or by speech.

The perennially dogmatic man is not one who is likely to change his opinions—he does not think enough for that. Moreover, he is likely to pride in his positiveness, and to regard it a weakness to change one's mind. Nevertheless, there are few surer signs of progress, of strength, than this, to cast off old opinions for new—when the new are found to be better than the old. Emerson well says: "Valor consists in the power of self-recovery, so that a man cannot have his flank turned, cannot be outgeneraled; but put him where you will, he stands. This can only be by his preferring truth to his past apprehension of truth, and his alert acceptance of it from whatever quarter; the intrepid conviction that his laws, his relations to society, his Christianity, his world, may at any time be superseded and debase."

Herbert Spencer, too, has spoken about this. "In proportion," he wrote, "as we love truth more and victory less, we shall become anxious to know what it is which leads our opponents to think as they do."

The habit of over-positiveness, of dogmatism, may be acquired through letting it creep on by easy and all but imperceptible stages; it may also be sloughed off as an undesirable attribute that threatens to "hide-bind." Fortunate is he who discovers this tendency if it exists in him, for then he may know what he can do.

The New Teacher.

The new teacher has come. Possibly she will not be your ideal, yet, again, she may be, if you give her a chance. At all events, give her a cheerful welcome; let her feel that she has come among friends, and that she is to be regarded as a partner with you in making the very best of that boy or girl of yours. The chances are that it will take the two (or three) of you, working to the very best of your resources, to accomplish that. The little lad swinging off, whistling, to school, bare-footed, book bag on back, or the little girlie toddling along basket in hand, may look very innocent, and they are innocent, but think of the possibilities in them—above all, of the possibilities for good—for development of intellect and character under

the right influences! Just think of them, and then realize the responsibility, the tremendous responsibility to both parents and teacher.

The teacher is hired to do your child good, but you cannot throw all the responsibility on her. If you are wise, you can help her more than you think; if you are foolish, you can undo much of the good she might otherwise accomplish.

Above all, do not suffer yourself to become prejudiced and indignant over the tales that may be brought from school. Do not express an opinion before the children until you have sifted the matter to the bottom—that is, if it is important enough to sift. Go to the teacher—or, still better, ask her in to tea—and talk the matter over, not in a spirit of storm and criticism, but kindly, casually, and quietly. There may be, you know, misunderstandings at school, as well as elsewhere, and the right kind of teacher will be pleased to straighten things out. If it should happen that there has been fault, and on the part of your child, be "big" enough to accept the fact, then talk the matter over afterwards with the child. Such a course will place you on the right footing with the teacher, and will have the best possible influence over the child. He will see that you are honest, and that you will not condone wrong even in him. The teacher, on the other hand, will recognize that you are her friend, and you need not be surprised to find her warm hand extended to you, figuratively or otherwise, in an unspoken pledge to unite with you more firmly than ever in making the best possible man or the best possible woman of the little delinquent.



The "Board of Health" at a Women's Institute Picnic, Bowen Road Branch.

If the teacher is not following just the course that you would like, be out-and-out about it, in a frank and kindly way, and to the teacher herself. Any teacher would rather have you do this than find out some day that you have been disapproving in secret or storming to the neighbors about it. Grasp the fact, at the very beginning, that the teacher must be your friend, at least so far as your children are concerned, and that if she is not, it is your duty to the children to see that she becomes so.

If you think of anything that would be an improvement in the school, suggest it. So long as you do this in the right way, you will not be misunderstood. There is a world of difference between meddling and suggesting.

You may feel that your age is

twice that of your teacher, that you have learned much by experience, that ideas have come to you which you cannot expect this young woman to hold at this stage of her young life—then, why not interest her in those things? Why not try to make her an enthusiast over them, even as you are? You can probably do this if you go about it in the right way. But you must not nag; you must not dictate; you must be ready to listen to contra-opinions, if there are any—for it may be that there are better opinions than yours; and that, possibly, even this young teacher holds them. Never forget for an instant that the least manifestation of "bossiness" on your part will undo much of the good you aim at. Bossiness never pays; it is too unpopular to pay, and brings only dislike and resentment wherever it appears. You must supplant it by tact, which, for most situations in life, as in this, may be spelled with a capital.

Again, let the children hear nothing but good of the teacher from your lips. It is most important that their confidence in her shall not be broken, and if you break it on one point, the chances are that you have broken it on all, and that henceforth you have not only lowered the prestige of the teacher, but decreased her influence throughout the school, since each child you send to it is bound to be a disseminating point of his suspicions among the other children. Children are very susceptible, and to them small things loom large. You cannot tell how the careless word which you have spoken may be magnified in their little minds. Let them see that the teacher is your friend. "Father's friend" or "mother's

Ontario the inspector now threatens to take away the Government grant if the necessary things are not provided, yet, there are so many helpful things outside of these few maps, charts, counting-boards, etc., which the necessities demand. What about a school library? What about blotting-paper, mounting-paper and cases for pressed weeds and weed seeds? What about the boxes of plasticine, and all the "busy-work" odds and ends that are so helpful to the tiny tots? Try the trustees in regard to these things, if the teacher's pleadings have been ineffectual; and if you can get them to grasp the fact that little humans are of as much value as pure-bred cattle and horses, they will listen. If this fails, join the teacher in getting up a school fair, a garden party, a concert, anything that will bring in the necessary dollars. No effort you make in any other direction is likely to be as profitable.

Our English Letter.

In one of my late letters I made allusion in the very vaguest of terms to what is known as "the Conciliation Bill," without giving any explanation of what it really asks or why it was framed. May I do so in a few words now? It seems that a number of members of Parliament formed themselves into a Conciliation Committee, with a view to introducing, as soon as possible, a measure which would enfranchise "women holding such house property as would qualify them, if they were men, to vote." The Committee claim that a majority in the House do favor woman suffrage, and may be willing to allow this bill to pass as "a working compromise," a kind of "half loaf is better than no bread," leaving it to the future to find a more ideal solution of the question. Whether the Laborites, who are, with hardly an exception, in favor of granting votes to women, would support this half-measure, is uncertain, for, by giving the franchise to women—property-holders only—it would exclude the women of the working class, and this even for the time being, until brighter days dawn, their champions could hardly be expected to tolerate.

The discussion of a topic so bristling with difficulties has naturally brought to light many curious facts in regard to the existing laws as they affect women; conditions which, from ignorance of their existence, have, however, been in the main wholly innocuous, and since the passing of the Married Women's Property Act in some degree ameliorated. Before that Act, a wife had no legal existence except through her husband. Her property belonged entirely to him, even though he were separated from her through his misconduct, and he had the right to dispose of it as he pleased during his lifetime, and to will it away from both her and her children (many instances of this being given in proof of the assertion). She had no right to her own earnings, and the English law has never yet been repealed that allowed a husband to beat his wife with a stick no thicker than his thumb, thus giving the husband absolute power over his wife. It is surely unfair that, whilst the husband has a right to appoint a guardian for his children to act conjointly with his widow, the wife has no similar right accorded to her, a case in point being recorded very lately, in which the husband married again, and the considerable income which should have been his

daughter's by his first wife, being diverted to the use of his second family.

As amongst the anomalies, a correspondent of one of the daily papers, evidently a lady legal practitioner, writes, in reply to one who is, she claims, utterly wrong in his statements regarding the Income Tax Law; "That he has overlooked the fact that one of its fundamental principles is that the income of a married woman living with her husband is deemed to be his income, notwithstanding any settlement or provisions contained in the Married Women's Property Act of 1882." She adds:

"The Inland Revenue authorities recently applied to me for a return of my profits from my business, in accordance with the provisions of the Income Tax Acts (vide Form No. 11). I replied that, as the said profits are legally deemed to belong to my husband (vide Income Tax Act, 1842, Section 45), I could not legally be supposed to know anything about them. This argument being strictly in accordance with the law on the subject, the officials had no choice but to accept my reply, and retire baffled.

"They thereupon applied to my husband for particulars of my income, whereupon he took up the attitude that, as, in accordance with the provisions of the Married Women's Property Act, my income belongs to myself, he cannot legally be expected to know anything about it.

"I have heard nothing since, and presume the Inland Revenue are still cogitating as to what is to be done next, and which Act they had better abide by."

In a somewhat similar case upon which she was applied to for legal advice, the applicant's own protest being ignored, the revenue authorities were informed "that they must not expect to eat their cake and have it, too; either they must regard my client as a married woman living with her husband, or as a married woman not living with her husband, but they would not be permitted to regard her as being both at one and the same time, a 'heads-we-win, tails-you-lose,' kind of arrangement."

Without venturing any direct comments of my own upon the subject of refusing or granting to women a recognized voice in the selection of the law-makers of their country, I will just ask if they have not some very good cause for resenting the many disabilities imposed upon them by their sex, and some valid reasons for their efforts to remove those disabilities? The late Lord Idlesleigh, in the House of Commons, said: "At present, women have power to take any amount of interest in elections, short of one little act, and that the most important of all. They take part in your contests, in public meetings, joining committees, making speeches, and canvassing as any man would do throughout an election. To all that you make no objection, but when it comes to going to the polling booth and giving a vote in a peaceable manner, protected by the ballot, then you say you demoralize and lower her character. Is that common sense?"

The late Lord Salisbury, in 1885, put himself on record as saying, "I earnestly hope that the day is not far distant when women will also bear their share in voting for members of Parliament, and in determining the policy of the country. I can conceive no argument by which they are excluded." And, in 1892, speaking in support of a bill for the enfranchisement of women, the Rt. Hon. Arthur J. Balfour said: "You will give a vote to a man who contributes nothing to taxation but what he pays upon his beer, while you refuse it to a woman, whatever her contribution to the state may be. . . . Depend upon it, this question will again arise, menacing, and ripe for solution, and it will not be possible for this House to set it aside as a mere speculative plan advocated by a body of faddists. Then you will have to deal with the problem of Woman Suffrage, and to deal with it in a complete fashion." And it is that prophecy of over eighteen years which has come true to-day.

H. A. B.

Hope's Quiet Hour.

Chosen for Special Work.

Who knoweth whether thou art come to the kingdom for such a time as this?—Esther iv.: 14.

"His appointment must be blessing. Though it may come in disguise, For the end from the beginning Open to His vision lies."

The objection sometimes made to the Book of Esther, that "the Name of God is not once mentioned in it," is a very shallow one. It is like saying that a man does not believe in God, and proving that statement by the fact that he lives his faith instead of talking about it. The Divine Sovereignty is plainly asserted many times in this beautiful Book of Esther, and it is stated very plainly in the text. Consider the circumstances. The Jews were captives in the land, and yet one of them—a beautiful young girl—had been made queen by Ahasuerus. Then her kinsman, Mordecai, by daringly refusing to cringe before the wicked favorite, Haman, had precipitated the doom which threatened his people. Haman took advantage of his position to satisfy his private vengeance, and letters were sent into all the hundred and twenty-seven Provinces "to destroy, to kill, and to cause to perish, all Jews, both young and old, little children and women, in one day"—the day having been chosen by lot. By God's good providence, the lot was cast for a day twelve months distant. But who could save the nation? Mordecai turns to Esther and says that the opportunity and privilege is hers. Salvation will come; if she is afraid to speak, then deliverance will arise from another place, but in that case she and her father's house shall be destroyed. And "who knoweth," he tells her, "whether thou art come to the kingdom for such a time as this?" Is not this a declaration of implicit trust in God? God will save His people, and has already shown both foreknowledge and power in placing Esther in a position where she—a young and timid girl, with no weapons but beauty and innocent charm—can win the king and punish Haman. Then see how bravely she obeys the call; knowing that God can help her, she calls on her people to fast for three days and nights, saying that she and her maidens will fast likewise. What good could fasting do if there were no God to see it? But, though this brave young girl leans utterly on her God, she does not fail to use all the weapons He has already given her. She puts on her royal apparel, makes her beauty shine out to the best advantage, and then dares death by going unsummoned before the king, saying simply, "If I perish, I perish." And her loveliness of face and character were a stronger defence to her people than an army of warriors. She won the king to her side instantly and easily.

Do you think Esther is the only person God has placed in a special position for special work? If we only realized that He has placed each of us with as careful attention to our capacity for our position as He showed in the matter of Esther, perhaps we might awake to a sense of the importance of our work.

It is foolish to shelter ourselves behind our apparent insignificance, for we know that in God's sight a kingly life is one that is nobly lived, though it may be passed in a carpenter's shop, or lived out on a lonely farm. Great results may come from very small beginnings. I have before me a wonderful book, called "The Romance of Medicine." Let us read a few sentences.

"Two cells, microscopic particles of protoplasm, so frail that a little sunshine or a trace of carbolic will slay them, meet, and, lo! in the meeting a miracle is wrought: they blend into one and the one cell multiplies in a mysterious way, and becomes a man with an immortal soul. Two other cells, likewise microscopic particles of protoplasm, made of exactly the same material, meet and blend, and, lo! a lily. The one

condition of development, the one condition of immortality, a meeting! How the meeting comes to mean this no one knows."

If God can take a tiny, invisible speck of material, and gradually change it into a man or a lily, or anything else He may choose, it is foolish to say that we are too insignificant to be considered by Him. That tiny "cell" might have thought itself of little consequence; but it grew and multiplied until the wonderful heart and lungs, the eyes and ears, and all the other mysterious parts of a living body appeared. A little red point developed until it became a mighty force-pump, sending a red river of life through the arteries at the rate of a foot a second, all through life, carrying each year "not less than three thousand pounds' weight of nutritive material to the various tissues, and three thousand pounds' weight of wasted material from the tissues."

Where does the power come from? How is it that each part of the body receives exactly what it needs, without anyone but God directing the cargo which is flying along this swift river?

God said to the prophet Zechariah: "Who hath despised the day of small things?" and He is constantly saying that to us in these days when the power of invisible microbes is being revealed more and more. Here is another quotation from "The Romance of Medicine":

"The cholera bacillus, for instance, can duplicate every twenty minutes, and might thus in one day become 5,000,000,000,000,000,000,000, with a weight, according to the calculations of Cohn, of about 7,366 tons. In a few days, at this rate, there would be a mass of bacteria as big as the moon." The multiplication of the loaves and fishes is nothing to this.

When we remember that we are surrounded by millions of invisible foes all the time, and that the voracity of each of these bacteria is so great that it can digest "about seventy-two times its own bulk in twenty-four hours," we feel that the danger of the Jews from the hatred of Haman was very slight in comparison.

But God saves through very weak instruments, sometimes. There are white blood-cells within our bodies—called by the learned "phagocytes"—which are always fighting against our invisible foes. They go swarming by millions along the river of the blood, and seem to be free to go where they are needed, even slipping like ghosts through the walls of the blood-vessels and wandering about in the tissues. So we can walk serenely in the midst of danger, because God has commissioned a mighty army of very tiny and weak soldiers to fight our battles for us. It is their business, and they are doing it well. But it is our business to provide them with plenty of fresh air and other wholesome things. Esther was willing to do her part, but she had to be supported by the prayer and fasting of her people.

If God can give to each of these tiny soldiers within our bodies its special work, is it likely that He has forgotten one of His own dear children? Be very sure that He has appointed you your post, and is watching with intense interest to see how you are holding it. If you are growing weary, and want to be relieved; just think how you would feel if His messenger came to-day and said, "Your task is taken out of your hands, your testing-time is over." Would you not wish that you had put more enthusiasm into it, more consecration, more earnestness of purpose? Would you not plead for a little more time, so that you could do the special work as the watching Master wished? We don't know how God is working our lives into His eternal plans—do the fighting phagocytes know that they are saving the life of a much-needed mother or father when they destroy a deadly microbe? They do their duty in a dark and narrow sphere, and God does great things through them. So He can do great things through us, if we simply obey His everyday orders, and are patient and trustful. If you are so impatient to get a perfect rose that you pull open the bud, you simply ruin both bud and rose, when you might have enjoyed both. It is wiser to rejoice in the happiness of the present, trusting God to unfold new and greater joys in the future. Always be on the lookout for gladness—our Father loves to give good things to His trustful and obedient children.

"God's plans like lilies pure and white unfold; We must not tear the close-shut leaves apart. Time will reveal the calyxes of gold. And if, through patient toil, we reach the land Where tired feet, with sandals loosed, may rest, Where we shall clearly see and understand, I think that we will say, 'God knew the best.'"

DORA FARNCOMB.

The Ingle Nook.

[Rules for correspondents in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen-name is also given, the real name will not be published. (3) When enclosing a letter to be forwarded to anyone, place it in stamped envelope ready to be sent on. (4) Allow one month, in this department, for answers to questions to appear.]

This morning, a man in our office—a man perhaps sixty years of age—was looking at a picture of some bowlers, also men of middle age, from forty or over, up. "It's very good of 'the boys,'" said he; and the thought came to me—Do men, as a rule, keep younger than women?

So often had I noticed the same thing among men. "Hello, boy! you here," and you look up to see two "boys" of fifty or over enthusiastically shaking each other's hand and pounding each other on the back as is the habit of the male species when delighted. Nor have you to go far in any town or city without finding similar "boys" bowling, curling, playing quoits, starting off on auto or fishing excursions, happy and care-free as children, all thought of self and business left fly, for the time, to the winds.

Take women of the same age in the same places, and what of them? True, you find many of them often enough in quest of pleasure, even devoting themselves to it, but with a strenuousness that makes a business of it. They are prone to take even pleasure seriously, and incorporate with them so much necessity for dressing, decorating, etc., that what ought to be a restful thing, becomes merely an exhausting work. Surely there can be no real pleasure without the spontaneity of pleasure, and this is what women of the pleasure-seeking class seldom accomplish.

Now, coming to the class of women who work, whether in town or country: Here, perhaps, a bit of play-time is more purely play, because it comes by way of a treat. The comparative novelty of a pleasure-jant gives it just the flavor of spice it needs. But the trouble is that women who work—referring, of course, to middle-aged and elderly women—are too likely to give too little time to pleasure. They let themselves get old, step into the background, and very placidly take it for granted that they have had their day and must now make way for the "young folk."

Now, might not these very women let go of themselves many a time if they would? Might they not keep young and be "girls" more often than they do, taking a little time, now and again, for pure spontaneous pleasure, and feeling that the earth will still turn if they are not forever on the one spot? That spot will have to begin to do without them forever some day.

One works the better for an occasional change; the water, with never a current or ripple, becomes stagnant. Yet it is so easy to become enslaved to little duties, and to think one's constant attention to them indispensable. Too often, perhaps, the house-mother forgets that she owes also a duty to herself as well as to her house, that she is, in fact, the heart and center of the house, the one element of it that it is desirable to keep bright and sparkling.

To keep the proper balance of things, pleasure, and rest, and change must alternate with work. The home itself is bound to be more ideally home because of such variety.

The right balance of things—how to keep it—one of the hardest things in the world perhaps, because so elusive, but how well worth striving for! We do not stop to think things out often enough.

We are afraid to venture out of the rut to try unaccustomed ways. Let us stop to consider—let us stop every day if need be—to consider if we are recognizing and keeping The Balance of Things.

Our Homes.

(Continued.)

Next, to the details:—Place windows, wherever practicable, in groups. They are much more effective, so far as the exterior is concerned, afford better lighting, and give much better chances for curtain arrangement than the old, high, narrow, "slit" species. Have a porch or veranda or two somewhere where they will not exclude sunlight, the Great Disinfectant, from the rooms, and have them broad enough to live upon all through the hot weather—double-deckers, with possibilities for sleeping-rooms on the upper portion. Ideally, one should have a porch living-room at front or side, and a porch working-room at the rear, close to the kitchen. If only one can be provided, common sense will plead strongly for the one at the back of the house, to which the housewife can take her potatoes and apples which she must make ready, or her sewing of an odd minute. The men, too, how they will enjoy it of a hot noon-hour, when they would never think of going around to the "Queen Anne" front veranda. Such a back porch, it goes without saying, must be broad and "roomy," supplied with table, chairs, and couch or flat hammock, and made shady by vines and tall hollyhocks and golden glow. Try one, if you have never heretofore had one. Should it be only built of rough flooring and roof, with rustic supports cut from the neighboring wood, it can be made a thing of beauty as well as of comfort.

Many builders now add a sun-room, with adequate heating arrangements for cold weather, which may be used as a sitting-room and conservatory. Sunshine is the cheapest medicine in the world, then why should we not provide for it by plenty of window-space and sun-rooms in all our houses?

Coming to the interior, it is to be taken for granted that you will choose a plan that will enable you to "keep house" with the fewest possible number of steps; that you will have convenience in every part: a closet off every bedroom, and a linen closet in the hall; a chute to send soiled clothes down to the laundry; a coat-closet off the kitchen;—there are many such details that you will have thought out for yourselves.

Apropos of built-in furniture, may we quote from a writer in *House Beautiful*: "It always adds to the beauty of a country house to build-in furniture wherever possible. Not only the customary side-boards and book-cases, but even couches and bureaus are charming when made permanent." Let your imagination roam in regard to built-in furniture; china cabinets, with plain or diamond-pannelled doors set right into the dining-room wall; book-cases ditto, in library or living-room; window-seats made like boxes with lids, in which may be stowed old magazines, etc.; a sewing-room window-seat made similarly, in which sewing may be placed; kitchen cupboards; wardrobes; having these, you will have scarcely any heavy furniture anywhere to be moved in order that the dust which has gathered below may be extricated. Think of the saving of work, and of the extra space to be gained by this simple expedient! The money to be saved, too, for built-in furniture does not cost as much as the movable kind, with legs and fancy tops and ornaments to be paid for.

Just here—the drawing-room, except among people who entertain much and formally, has almost taken its departure, giving way to the big, cheery living-room, which is used all the time. Very often a small reception room into which a caller may be switched, in order that the privacy of the family may not be intruded upon, is introduced, but it need take up but very little space.

FINISH FOR THE WOODWORK.

Don't grin. Graining is a mere imitation, and it is never used now in the best houses. Paint is often good, and woodwork painted in greenish-gray, or in ivory white, goes well with many furnishing schemes, the white being almost invariably used with mahogany furniture. A good all-round finish that will go with

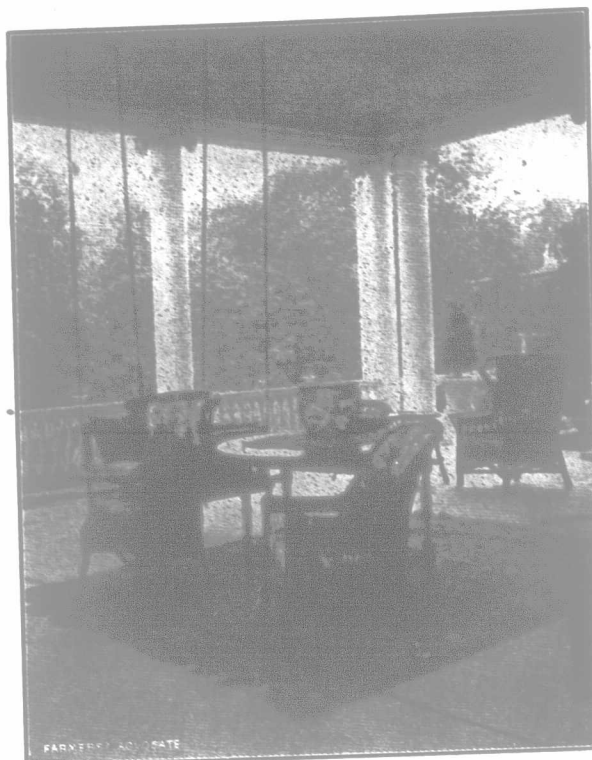
almost any paper or color scheme, is a brown stain, which may be made by mixing a little color with oil, the surface to be afterwards waxed and rubbed down to a soft, dull finish. Shiny varnish of any kind is now considered cheap-looking and vulgar, although an excellent floor-finish, said to be more easily kept clean than the oil and wax, is made, with varnish as a foundation, as follows: First stain the floor, then after 48 hours, give a coat of good floor varnish, a second and third coat of this varnish to follow, allowing 48 hours between applications. Finally, rub well with pumice and oil, a process that will give the beautiful, soft finish of a waxed floor, and need renewing much less frequently. To clean such a floor, simply wipe it with a damp cloth.

Finally, have all woodwork plain. Grooves and carvings do not look any

teaspoon salt, pepper to taste, 1 teaspoon minced parsley. If not thick enough, moisten a teaspoonful flour with cold water, thin with the soup, and stir in. Let boil up once, and serve with bits of bread buttered and toasted in the oven.

Small Fruit Bread.—Stew blackberries, or any other small fruit, and sweeten to taste, or heat the canned fruit. Pour hot over thin slices of buttered bread, making alternate layers of fruit and bread, and leaving a thick layer of fruit for the last. Put a plate on top, and, when cool, put on ice. Serve with cream and sugar as pudding.

Ginger Cake.—One cup sugar, $\frac{1}{2}$ cup butter, 2 eggs, $\frac{1}{2}$ teaspoon soda dissolved in $\frac{1}{2}$ cup milk, 2 cups flour sifted with 1 teaspoon cream tartar. Add also a tablespoon ginger. Bake slowly about $\frac{1}{2}$ hour in a square baking tin, and, when



The Porch or Veranda.
An out-of-door living room.



A Sun Room.
(By courtesy of *House Beautiful*.)

better, nor as well, and only afford crevices in which dust may lodge, and which must prove a weekly thorn in the flesh to the housecleaner.

(To be continued.)

Recipes.

Summer Soup.—Peel and slice 2 potatoes and parboil. While they are cooking chop 2 tomatoes, slice the corn off 2 ears, and add 1 slice onion. Drain the potatoes and put all on to cook in 2 quarts cold water. When done, rub all through a colander, return the soup to the pot, add a level tablespoon butter, 1

cool, split into two layers and spread whipped cream between and on top. Sprinkle grated coconut over top.

Sponge Custard.—1 pint milk, yolks of 2 eggs, white of one if large, $\frac{1}{2}$ ounce gelatine soaked in cold water, 2 tablespoons white sifted flour, 2 teaspoons vanilla. Heat the milk and stir into it the well-beaten yolks and sugar; return it to the saucepan and stir till it thickens. Melt the gelatine by adding a tablespoon of boiling water and stirring it in a vessel of hot water. When melted, add it to the milk, and when well mixed set away to cool. As soon as it commences to set, whisk in the whites,

egg-beater, and add to it the white of egg previously whipped to a froth. Beat rapidly, and until quite spongy, then put into a mould. Let cool five or six hours at least. Dip the mould, before using, in hot water. This pudding may be made the day before using.

Creamed Apple Sauce.—One quart cold, green apple sauce, 1 cup sugar, 1 cup rich milk or thin cream, whites of 2 eggs well frothed. Mix sugar and cream until well dissolved, then add whites of eggs, and beat into apple sauce.

Cucumber Pickles.—Take as many small, crisp cucumbers as will fill a half-gallon glass jar. Cover with a brine made of 1 quart water to $\frac{1}{2}$ cup salt, and let stand overnight. Remove from brine. Pack as closely as possible in a jar. Bring to a boil 1 cup strong vinegar and $\frac{1}{2}$ cup water, $\frac{1}{2}$ cup sugar, 2 sticks cinnamon, and 1 dozen whole cloves tied in a thin cloth. Fill jar and close air-tight. They will keep for any length of time, or will be ready for use in two days.

Wheat Gems.— $1\frac{1}{2}$ cups cold cooked rolled wheat. Season with a pinch salt; add $\frac{1}{2}$ cup milk and white flour to make a stiff batter. Beat well and drop in hot gem pans. Bake quickly.

Milk Sherbet (Delicious).—Squeeze juice of 6 lemons on four cups sugar. Put skins with a pint of water on the fire and let simmer 10 minutes. Scald 2 quarts milk, with 2 tablespoons corn-starch and 1 cup sugar. When cold, put in the freezer, and when it begins to stiffen, add the syrup of lemon juice and sugar; then freeze.

Pickled Onions.—Use the smallest onions you can find. Pour hot water on them, and when the skins can be easily removed, put in strong brine to cover. Let stand from one morning until the next, then pour off the brine and replace with new, allowing it also to remain on the onions for 24 hours. Change again on the third morning, and on the fourth put the onions in fresh water and heat to the scalding point, stirring frequently. Add a pint of milk to the water while boiling to whiten the onions. Finally, drain the onions well and place them in jars with sliced red peppers scattered through them. Pour scalding hot vinegar to fill jars, and seal.

Chili Sauce.—Pare 12 large tomatoes and chop fine; peel 2 good-sized onions and chop also; then chop 4 medium-sized green peppers. Now mix all together and add 2 tablespoons salt, 2 tablespoons sugar, 1 tablespoon cinnamon, 3 cups vinegar. Boil $1\frac{1}{2}$ hours, stirring well, and seal hot.

Baked Tomatoes.—Slice the tomatoes and drain well. Put a thin layer of fine breadcrumbs in a well-greased baking dish, a thick layer of tomatoes, enough minced onion to flavor, dots of butter, pepper and salt, and another layer of breadcrumbs. Repeat until the dish is full, having crumbs on top. Bake about an hour.

Fried Tomatoes.—Cut smooth, solid tomatoes into slices and drain well. Dust each with pepper and salt. Beat an egg in a saucer until light, and add to it a tablespoon of boiling water. Dip each slice first in this, then in crumbs, and fry brown on each side. Take up carefully, and serve very hot.

Baked Onions and Cheese.—Cook some onions, drain, and put into a baking dish. Cover with white sauce. Bake for 20 minutes, then draw out the dish, cover with grated cheese, return to the oven, and brown.

Peach Trifle.—Boil 1 cup sugar in 1 cup water until it thickens. Pare and quarter ripe peaches, drop into the syrup and stew until tender, then let cool. Line a glass dish with slices of stale sponge cake,—you may saturate the slices with orange juice or sherry if you want the dish to be very fancy. Fill up the dish with the peaches, and garnish with whipped cream.

Tomato Canapes.—Fry slices of bread to a golden brown. While still hot, put a slice of tomato on each, and a spoonful of salad dressing on top.

Pear Bavarian Cream.—Cook 1 cup sugar in 1 cup water to a syrup. Have ready a quart of thinly-sliced pears. Drop them into the syrup, add the juice of a lemon, and simmer until tender. Soften $\frac{1}{2}$ box plain gelatine in cold water to cover, then dissolve by pouring a little boiling water over it. Strain, and stir into the cooked fruit. Take from the fire immediately, and stand in a cold

AUGUST 18, 1910

FOUNDED 1886

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place until partly congealed, then beat into it a pint of whipped cream. Turn into a mould that has been rinsed in cold water, and set on ice or in a cold place to harden, overnight if you wish.

Beet Salad.—Scoop out the centers of boiled beets (round ones), leaving a wall half an inch thick. Put beets in vinegar. Before serving, fill with chopped celery, mixed with a little chopped cucumber pickle. Put a spoonful of dressing on top of each.

Cauliflower in Ambush.—Part a medium-sized head in pieces and cook till tender. Add 3 well-beaten eggs to a pint of milk and heat gradually, stirring constantly, until it thickens. Season with pepper, salt and butter, and add the drained cauliflower. Have ready small hot biscuits cut in two, buttered, and placed on a platter. Put the cauliflower over them and serve. Grated cheese may be added to this dish if liked.

Sweet Pickled Apples.—Make a syrup of 1 cup vinegar and 2 of sugar. Add a few pieces of whole cinnamon and some cloves. Pare and core sweet apples; drop them in the syrup, and let them cook until tender.

Green Corn Cakes.—Take cooked corn left over from a previous meal and cut it from the cob. Put a cupful of milk to every cupful of corn, 1/2 cup flour, 1 egg, pinch of salt. Mix well into a thick batter and fry in very hot lard.

Maryland Fried Chicken.—Make the chicken ready, and cut it into pieces. Flour each piece and dust lightly with salt and pepper. Fry with a close cover over the pan until tender. When done take out the chicken, and make a rich gravy in the pan. Put the chicken on a platter with pieces of fried mush around, and serve the gravy in a separate pitcher.

Astrakhan Jelly.—Wash, quarter and core, but do not pare, Astrakhan apples. Cook until soft with a tumbler of water in a granite pan. Put all in a jelly bag, suspend over an earthen dish, and let drain all night. Do not squeeze the bag if you want the jelly clear. Measure a pound of sugar to a pint of juice. Boil the juice down for 15 minutes, and heat the sugar in the oven. Add the hot sugar and boil five minutes longer. Pour in jelly glasses, and after a day or two pour melted paraffine over the top and seal.

Peach Delight.—Take good, ripe peaches; pare them, cut in halves, leave a few pits in, put them in a granite pudding-dish, layer about with sugar and a sprinkling of flour. Dot the whole with bits of butter and add a cup of water. Put on a top crust, and bake.

Stuffed Tomatoes.—Mix together 1 cup fine breadcrumbs, 1 tablespoon minced parsley, 1 tablespoon melted butter, salt and Cayenne to season, and two well-beaten eggs. Scoop out 6 large tomatoes, fill with the mixture, and bake 20 minutes.

Baked Apples.—Be sure to choose apples that will give under the thumb when pressed.

Suggestions for the Care of the Hands.

We all admire nice hands, and there are people who can tell a great deal by one grasp of the hand in regard to health, habits and character. We to whom nature has given short, chubby hands, envy those with long fingers and nails, as they usually denote a refined character. By careful attention and perseverance, we can vastly improve the condition of our fingers and nails.

Some people crush the tips of their fingers and nails to make them longer and narrower, and press the skin from the root of the nail to make it appear longer. This method requires considerable patience to acquire the desired results.

A great many persons have the habit of making their finger joints crack, not knowing how harmful it is to the appearance of that member. It is a habit which soon causes the finger joints to become very large, which is an objectionable feature.

Hot water is one of the chief causes of red hands, and this makes many girls dislike washing. One way to avoid putting the hands in very hot water, is to put the hands in a pan, and then let the water run over them. After two applications of hot water, they may be placed in a basin to dry.

Glycerine and rosewater is one of the best things to use if the hands are subject to chapping and cracking. The drawing on of an old pair of gloves before retiring keeps the moisture in the skin and retains its softness.

Carbolic-acid salve is good for healing quickly after cracks have made their appearance. A little forethought will prevent hands from becoming badly cracked or chapped. Be careful not to go out doors with damp hands; and avoid using soaps that are injurious to the flesh. Pure castile soaps, or soaps with a good deal of vegetable oils, are the best. Most of the washing fluids are hard on the hands, as well as on the clothes.

Biting the nails is considered a very bad habit, and usually denotes nervousness, but very often it is only a habit. Many are annoyed by the appearance of white spots on the nails. These are often due to injury. The use of a steel nail file to press the skin away from the roots will cause them. An orange stick or toothpick are the proper things to use for this purpose; also for cleaning the nails.

If you are troubled about the skin adhering to the nails, or if the nails are brittle, make a practice of rubbing vaseline, cold cream or cocoa butter into them all about the roots. Do this every night, and in a few weeks you will see a great improvement.

The essentials of a manicure set are a nail file, a pair of curved nail scissors, an orange stick, a chamois polisher, and a little bit of nail powder. First dip your fingers into warm, soapy, soft water. When the nails are soft, file them into a curve, so that the whole nail will resemble the shape of an almond. Then use the soft stick to press the skin away, so that the nail shall not be hindered from growth. After this is done, carefully dry the nails and rub vaseline into them before applying the powder. Then polish with the chamois, being careful not to hurt the nail by the friction. Lastly, rinse the nails once more, dry, and rub them with a little fine powder.—Sel.

Our Scrap Bag.

If rooms smell cellar-like in summer, place a pad made of five or six thicknesses of paper over the register, and cover with a thick rug.

To Peel Boiled Eggs.—Boil the eggs in salt water; the salt cracks the shell and loosens it from the egg.

Black ribbon may be freshened by rinsing it in hot coffee, or in alcohol. Wrap it around a glass bottle to dry.

Turn a colander upside down over meat frying in a pan, and prevent the grease from spattering.

Bake bread in baking-powder tins to have nice round slices for picnic sandwiches.

A bicycle pump will often clean a sewing machine that has become clogged.

A Good Silver Polish.—Make a paste of alcohol and whiting. Apply to the silver, and allow it to dry. Rub off with a soft piece of old china silk or chamois. Wash with hot water and soap, rinse in hot water, and wipe, if necessary. If any whiting is left over, it may be dried and used again.

When Plums are Ripe.

Plum Charlotte.—Pit the plums and place them on the back of the stove, with the bottom of the saucepan just barely covered with water, and enough sugar to sweeten to taste, which you can determine after the plums have boiled tender, then add more sugar, if required. Line a mold with a plain sponge cake baked in a flat pan. It should be very thin or, if over an inch in thickness, the cake may be sliced through the middle, after cutting it into the desired strips to line the sides and top of the mold. Fill in with the plums, and, after placing on the top slice of cake, set a plate on it with a weight, not too heavy, that will press the whole together. Serve with plain or whipped cream. The sponge cake for a fruit charlotte should be made with less sugar, half the quantity.

Steamed Plum Pudding.—For this style of pudding, make a soft dough as for dumplings. Roll out thin and cut into four divisions to fit in a mold, place a layer in the bottom and the halves of ripe plums spread over with a sprinkling of sugar; fill up the mold with alternate

layers of the dough and plums, with a layer of the dough on top. Cover the mold closely and steam two hours. A cream sauce is made for this pudding by boiling together a cupful of sugar with half a cupful of water for fifteen minutes. Let this syrup cool to below the boiling point before adding half a cupful of cream; flavor with vanilla.

Plum Tarts and Pies.—Plum tarts are delicious. The tart tins used should be deep, and of individual size. Line with rich pie-paste and cover with the pitted plums sprinkled with sugar; serve with whipped cream. In making the pies, the fruit is similarly arranged on the bottom paste and a top crust is added. The plums may be prepared more specially by pouring over them a hot syrup before filling the tarts or pies. Place the quantity of plums required in a syrup made as for the above cream sauce, of sugar and water. When the syrup comes to a boil, drop in the plums. Boil for five minutes, then place the saucepan on the back of the fire, where the contents will simmer until the plums are tender, when they are to be removed, and the syrup boiled again until it is reduced one-third; then enough of it is poured over the fruit in the pie-plates to make the plums juicy when the pie is baked.

Plum Snow.—This is an excellent emergency dessert, as it is quickly made, and may be cooled in the refrigerator. Stir two tablespoonfuls of sugar into a cupful of ice-cold cream. Whip it with the egg-beater until quite light, then add the whipped whites of two eggs and half a teaspoonful of vanilla; beat together until the mixture will stand alone. Prepare some fine, ripe plums by pitting them and sprinkling them with sugar, and set both dishes away to chill until serving, when the fruit and cream should be placed together; drop a spoonful of the cream on a dish, spreading it a little, then place a few plums on it and top with a cone of the cream with half a plum on top.

How to Serve Ripe Plums.—Ripe plums are delicious; the large yellow variety that resemble small apricots to serve as fruit to be eaten out of hand. Their flavor may be still further improved as an accompaniment to small cakes or dainty rolls for simple refreshments if they are filled with a sweet, in place of the pits. Soften marshmallows, after cutting them each into four pieces, and roll in finely-chopped nut-meats. Fill the cavities with these pieces, and arrange on the dish with the slit side down, so that they will be a delicious surprise to the guest. They may be served three or four on a dish with whipped cream, if preferred.

Long Ago.

I once knew all the birds that came
And nestled in our orchard trees;
For every flower I had a name—
My friends were woodchucks, toads, and
bees;
I knew where thrived in yonder glen
What plants would soothe a stone-
bruised toe—
Oh, I was very learned then—
But that was very long ago.

I knew the spot upon the hill
Where checkerberries could be found;
I knew the rushes near the mill
Where pickerel lay that weighed a
pound!
I knew the wood—the very tree—
Where lived the poaching, saucy crow,
And all the woods and crows knew me—
But that was very long ago.

And, pining for the joys of youth,
I tread the old familiar spot,
Only to learn the solemn truth—
I have forgotten, am forgot.
Yet here's this youngster at my knee
Knows all the things I used to know;
To think I once was wise as he—
But that was very long ago.

I know it's folly to complain
Of whatsoever the Fates decree;
Yet, were not wishes all in vain,
I tell you what my wish should be:
I'd wish to be a boy again,
Back with the friends I used to know;
For I was, oh! so happy then—
But that was very long ago.

—Eugene Field.

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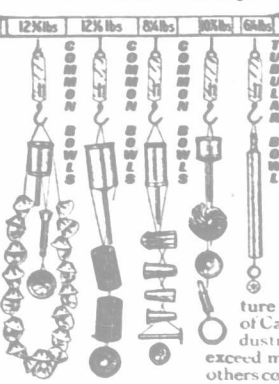
Professor (after calling on Blank and waiting for him to recite)—Seems to me, Blank, you ought to be able to answer my question with all the prompting you're getting back there.

Blank—Well, professor, there's such a difference of opinion around me that—

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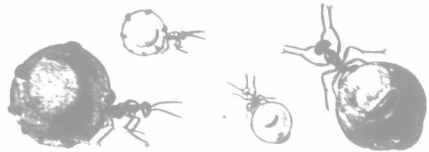
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The Beaver Circle.

[All children in second part and second books, will write for the Junior Beavers' Department. Those in third and fourth books, also those who have left school, or are in High School, between the ages of 11 and 15, inclusive, will write for Senior Beavers'. Kindly state book at school, or age, if you have left school, in each letter sent to the Beaver Circle.]

Ants and Their Curious Ways.

No need to ask any of our Beavers if they ever saw an ant; every country boy and girl knows that ants are among the most numerous of our insects, and that they may be seen in fields, in woods, on trees and plants, in the ground, and even, sometimes, in our houses. If, however, I were to ask how many of our Circle had ever "observed" the little creatures long enough to understand any of their ways, I wonder how many could answer, "I have!"



Honey Ants, Filled with Honey.

I remember very well an ant-colony that took up its abode in a veranda-post of a house where I once was staying. The post must have been decaying up somewhere in the inside. At any rate, the ants were very busy tunneling out a house there, and day after day we used to watch them bustling in and out of a little hole at the bottom, carrying tiny particles of wood, which they dropped on the step below. For curiosity's sake we did not sweep that step for a few days, and you would have wondered to see the pile of "sawdust" that soon accumulated. Probably the little performance would soon have been put a stop to, only that the post was old, and had to be replaced soon, anyway.

Well, one day we saw an ant coming out carrying a dead one. He did not stop and drop his load as he would have done had it been a bit of sawdust, but on he went down one step, two steps, three steps, then he put it down and ran back again. So you see the ants know that houses must be kept clean of anything that would putrefy or grow foul. In fact, they are very clean little house-keepers.

You all know that there are ants that build—real mound-builders, as you will understand if you have ever happened to sit on an ant-hill. If you could look right into the hill, you would find it full of little galleries, with others often running far and wide into the ground; and if you could talk with people who have studied ants long and closely (or read their books), you would hear them say that ants have regular governments, with a queen at the head, as have bees, and that they sometimes keep slaves and often make war on other tribes of ants in order that they may bring home prisoners to be slaves to them. Indeed, one of the most interesting things in natural history, for those who have been fortunate enough to see it, is one of these battles of the ants.

Now, a few words about their general life history, which is very, very curious. In the first place, I must tell you that beside the queen and the males, there are in every ant-colony a great many workers, or "neuters," which seem to exist for the sole purpose of doing the work of the colony. They have no wings, while the very few males and females have wings.

Now, when the home is ready, the queen lays her tiny, white eggs, but instead of caring for them herself, what does she do but turn them over to these workers, who look after them very carefully. By and by, in about a month, helpless white grubs are hatched out of the eggs, and now the workers have plenty to do, for they have to feed these new arrivals for about six weeks longer. At the end of that time the grubs begin to spin tiny cocoons around themselves, just as so many of the caterpillars do, and then they become changed in these cocoons into little, still pupae, and after-

wards, late in autumn, come out from the pupa-cases or cocoons as full-grown ants. As winter comes on, they all go into the lower galleries, where they hibernate, as do the bears, and in spring, out they come, the new males and females flying off to start colonies of their own.

The food of the ant is sometimes animal, sometimes vegetable, and sometimes both. They are very fond of sweet liquids, and some species gather and store a species of honey.

Now, I must tell you something very odd. Have you ever heard of plant-lice that exude "honey-dew," a sort of sweet liquid, from two tubes in their body? You may be sure that the ants know all about it, and so fond of the honey-dew are they that they follow the plant-lice, and sometimes carry them into their nests, where they feed them and care for them. Whenever they want some honey-dew they just go up to a plant-lice and stroke it, and in a little while out comes a tiny drop of the sweet stuff. For this reason, these lice have sometimes been called the "milch cows of the ants."

One of the honey-dew species of plant-lice is the corn-root louse, which lives underground on the roots of corn; and it is said that the ants keep tunneling the earth away from the roots to give these lice a chance to feed. They also carry lice from plant to plant, and so in this way do a great deal of harm. Ants are never beneficial, as are the ladybugs, you remember.

Where the corn-lice is troublesome, late fall plowing, when the nights are frosty, is useful.

I have spoken of a species of ants (for there are many kinds) which store honey. These do not make combs as do the bees; they have a very queer way of keeping it. Among them are developed special forms of ants, with very elastic abdomens. The rest of the ants get to work and literally cram honey into these ants, until the abdomens fill up as large as small cherries, and the poor owners cannot walk at all, but can only cling stupidly to the walls of the nest. When the other ants want some honey, they draw it away.

In the tropics, ants become a terrible scourge. In part of Central Africa, a small, white species, tunnels into wood of any kind, so that all houses have to be set up on posts covered with some substance that will keep the ants from creeping up. . . . Here, too, live the awful "foraging ants," which start out in a vast army eating every living thing before them, and all provisions in houses. When the people in a village hear that they are coming, they fly for their lives; but they have one comfort,—they know that when they return to the village they will find all insects, all rats, mice and snakes devoured, as well as all the provisions.

In South Africa, and some other places, there is a kind of ant that builds hills many feet high. These often gave our soldiers some trouble during the Boer war. In Texas, and some of the other Southern States, there is a very curious species known as the "agricultural ants," which live in immense underground nests, and actually cultivate on the ground above the nest, a kind of grass of which they are very fond.

Now, just one word in closing. If ants come into your house, fill a sponge with sweetened water and place it where they are found. When the sponge is full of the insects, drop it into hot water, and keep repeating until the ants no longer appear. Ant-hills may be destroyed by putting carbon bisulphide in them, but as it is very inflammable stuff, older folk had better attend to that.

Beaver Circle Notes.

Marion MacLean sends a drawing, a copy, which is very well done, except that the line defining the boundary of the lake is too strong. It does not give any idea of perspective.

Beatrice Annett sent the story of Silverlocks and the Bears, but as most of the Beavers have already heard it, we can scarcely give room for it. We would much rather have strictly original work from our correspondents.

Very few took part in the Flower Competition for July. I suppose all the boys and girls were too busy having a good time to want to bother with competitions. Luella Kilbough has again

won the prize. She is one of our most faithful Beavers. Her composition will appear next time.

The Letter Box.

Dear Puck and Beavers,—This is the first time I have written to this Circle. My father has taken "The Farmer's Advocate" for about one and a half years, and I enjoy it very much.

I live on a farm, and think I would rather live on a farm than in a town or city. I go to school, and like it. There are about thirty scholars going to our school.

I agree with Joseph MacDonald, to have a badge with a beaver on it. I have read a few books. I think Elsie books are nice, but my favorite one is "Basket of Flowers."

We live close to the beach, and go down to bathe most every day; perhaps I will go down to-day.

Hope this will escape that w.-p. b.
BESSIE BURTON.

Black Capes, Que.

Dear Puck and Beavers,—I would like to have a little corner in your Circle. I am ten years old, and am in the Third Book. I am the only girl, and have one brother; he is twelve years old. He tried the Entrance this year, but failed.

A short time ago, two robins built their nest in an apple tree just outside of our kitchen window. We watched them building the nest, and in two or three weeks there were little birds in it, and then the old birds had to be busy at feeding them. They visited a neighbor's cherry tree and he shot them. We brought the little birds in and put them in a box, and we fed them cherries and berries. Two of them got quite smart, but when we got up one morning they were all dead.

NETTA ELLIS (Book III).
Camilla, Ont.

Perhaps the little birds need some stronger food than berries and cherries. Robins eat a great many insects, you know.

A Muskoka Idyll.

They sat on the dim veranda
And gazed on the misty moon;
The midsummer dusk was tender,
And all was propitious to spoon.

They should have been—oh! so happy,
But alas! for the best-laid plan,
For behold there were sixteen women
And but one dejected man.

—Courier.

The Slighter Ghost.

By Catharine L. Johnston.

One rainy Sunday, Jimmy asked his wife to help him look over certain packets of old papers. He had forgotten for the moment that he had ever written verse, and even when Mrs. Jimmy mentioned a date, he did not recollect.

"These are letters from your mother, written in 1901," she said.

"Oh, read those, Mary; they are like mother," he answered, with some pride. "Read them aloud."

So she read them, stopping for explanations of the household jests and allusions, considering gravely the philosophical and political views expressed, and making out of it all a picture of those earlier days she had not shared.

"So that's the kind of boy you were," she said, replacing the last letter in its envelope. "And here's something else in the same drawer—poetry, Jimmy! Is that another kind of boy you were?"

"Poetry!" he said, remembering. But she was already reading it. He listened in helpless silence.

"That's pretty bad," he said, with conviction, when she had finished.

"Pretty bad," she echoed slowly. "But—for whom did you write them? I didn't know there was anyone—before me. It's love poetry, not an imitation. You couldn't have written such bad verse if you hadn't meant what it said."

"I meant what it said," he answered, and took the paper in his hand.

"You're not to tear it," she said, warningly, "because I found it, you know."

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When Writing Mention This Paper.

He nodded acknowledgment of her right, and read the imperfect verses through once more.

"Tell me about it," Mary said.

"If I can," he answered. "How much self-analysis do you expect of a fellow of nineteen? And it's hard to analyze a stage of your development when you are once past it—though it's called easy. You can't feel what you were like; you can only remember." He stopped to consider. "Yet, some things aren't just remembering. I was nineteen that year; I thought I was in love; I have never stopped thinking so; and yet"—he looked about the pleasant, quiet library, the heart of their home, and then at Mary.

"And yet this is home, you mean?" she said. "That's what takes my breath away. I never imagined any home but this, not in my unlikeliest dreamings. But you—for you there might have been another home if—if what?" she broke off to ask. "You haven't told me what happened Amy?"

"Amy?"

"Yes. I remember thinking, when I read the second Locksley Hall, that I'd sooner be Amy than Edith. Wouldn't you? He just called her a slighter ghost to flatter Edith. And now I'm Edith."

"It isn't like that a bit," he protested. "You don't understand—any more than I do," he added. "But it isn't like that—not like two girls of contrasted characters. It's more as if that were the beginning of—of me, I suppose. A fellow doesn't think much at nineteen; at least, I didn't. I never thought of her as a sweetheart, or a wife-to-be; I just thought of her. I didn't get past that. You know, if you opened your eyes for the very first time, and saw light, you wouldn't think of anything but that it was light."

"No, not at first. But after a while you'd have begun to see what light was for, and then you would have lighted your home with it. And it wouldn't have been this home. You see?"

"I see," he said, slowly. "It's rummy when you look at it that way. Hear the rain on the windows, and realize that this is the present we're in—this present when it seems to me there never was anyone but you from the beginning of time. And yet that other day, the day when I made those verses, is no more past than this minute I'm wasting in misleading talk."

"It isn't misleading," she said, and was silent for a little. "You haven't told me yet what happened Amy," she said, at last.

"She is dead, dear."

"Dead!"

"It was that summer we went out to the Coast—father and I. You've been through the Rocky Mountains?"

"Yes, but it's a long time ago."

"Did you try to describe them when you came back? Neither did I."

"But I didn't fall in love on the way through them," Mary said.

"Oh, that wasn't why. There's room in one's consciousness for two things at a time, when they are things as big as that. No; it was the mountains' very selves. When I thought of them afterwards, my mind used to crawl 'way off into a corner of my head and hope nobody would ask it any questions. Well, perhaps Amy had something to do with it—Amy and the mountains—they were all associated in my mind. Mountains can't be unhappy, you know—not meanly unhappy, at least, not discontented or sulky or spiteful. And Amy couldn't, either. The movement of her mind was bright and quick and clear, like the mountain streams."

"They were in the same Pullman with us, Amy and her relatives, and we were all more or less acquainted before our ways parted. Amy's father and mine used to smoke cigars and talk politics in the smoking room, and the rest of us admired the scenery. You know the way to see, when a particularly swagger bit of outdoors comes along on the other side of the car, is to drop on your knee in the aisle, and look out of the opposite window, while the people in that seat carefully hold their heads out of your way. Amy's mother had a good profile."

"And hadn't Amy?"

"Oh, I daresay she had. I never looked to see. But I do know the color of her hair, it was like yours, only lighter, and

of course she wore it in a long braid; she was only sixteen."

"Sixteen!"

"Yes. Oh, did you think it was a two-sided love affair—that she cared for me? Of course not. She didn't know anything about it; she never saw those verses. I had some sense, if I was only nineteen. But, oh, Mary, it was good, good, good for me, that first light! I never said a word to her, of course, though we got on fine talking of everything else, and even of herself and myself (except that one thing) and what we thought and felt, and all about the insides of our minds. You know youngsters' talk?" Mary nodded, but said nothing.

"At Glacier the train stopped for a little time, and we all got off and walked about. Do you remember the stream that falls over itself all the way down the mountain there? We looked at that a long time; Amy loved mountain streams, too. She tried to get a snap-shot of the glacier, but if that film had ever been developed it would have been a better picture of me than of the glacier, because I blundered into the foreground just as she was taking it. I wanted to ask her to send me a copy, I remember, but I hadn't the cheek. After she had taken the picture, we walked up and down and talked till the conductor called "all aboard!" We had other talks, but that's the one I remember best."

"What did you say?"

"I don't know. That isn't the way you remember talks; you just remember they were good."

"I know that," Mary said, placidly. "I just wanted to see if it was really good."

"There was another," he went on. "Just before we reached Vancouver, but I knew we were near the end of our journey, and I hadn't any wit in me, nor the right mood for talking. But I talked, because I knew there wouldn't be another chance; they were going down to California, after spending a day in Vancouver." He stopped, and looked at Mary. "It sounds flat, doesn't it? But you'd have understood if you'd been there."

"I understand," she said.

"We took the steamer to Victoria," he went on; "and a few days later I read in a newspaper the account of a train wreck—the train they left Seattle in. I knew their route, of course, because I had heard them talking of it. But I don't think father did, and I put the paper out of his sight; I didn't want to hear anyone speak of it. Do you know, I didn't even know their name? Dad may have known it, but he was talking politics to someone else by that time, and I wouldn't have asked him for the world. And I didn't need to; there were only three lives saved out of their Pullman, and they were grown people. So I knew, and I hid the paper."

"Poor boy!" Mary said in a half whisper. His attention was caught for a moment by her tone, but the tide of memory carried him on.

"I didn't know her Christian name, even; only the nickname they called her."

"They called her Roslein," Mary said, suddenly. "And not one of them could pronounce it, and her name wasn't Rose in the least, or anything like it. So when she grew old enough, she made them stop and call her Mary."

"Mary!"

"Yes. We didn't take that train, because papa had caught a heavy cold on the steamer, and we stayed in Seattle till he was better."

"Mary!"

"And you were that nice boy. I'll show you the picture of you and the glacier, if you'll wait a minute; it isn't a bit like either of you." She was rummaging in her desk, and presently came back to him with the photograph in her hand. "And that's you there, Jimmy. Now give me my verses."

He gave them, laughing, and bent eagerly to examine the picture.

"Roslein—Amy—Edith—Mary," he said, "we'll go again some day."

"Of course we will," she answered; "because that time I didn't know it was us."

The Absent-minded Professor—My tailor has put one button too many on my vest. I must cut it off. That's funny; now there's a buttonhole too many. What's the use of arithmetic?

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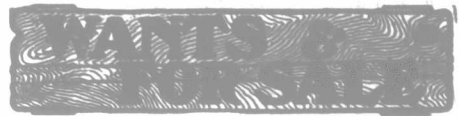
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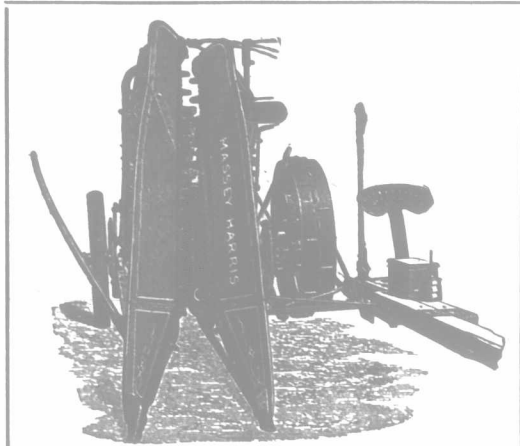
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It is questionable if there is a better known character connected with baseball than Napoleon Lajoie, of the Cleveland team. Fans all over the circuit like to see Lajoie play. He is a big drawing card. A number of years ago, while a member of the Philadelphia Nationals, he asked a couple of friends to see the game. At the pass gate he was informed that Andy Freedman had issued an order that no player had a right to bring in any friends. Larry argued, but all in vain. The only thing he could do was to purchase regular tickets. All this happened in the days before the inauguration of the foul strike rule. The very first time at bat Larry fouled fourteen balls over the fence. Mr. Freedman got \$1.50 of his money at the gate, but Larry burned about \$20 of Mr. Freedman's money in fouling balls over the fence that never returned.

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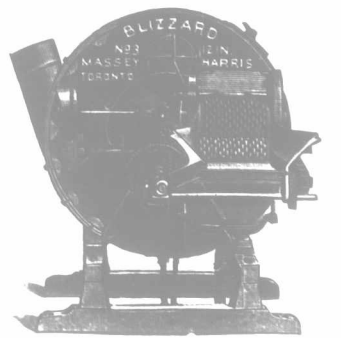
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Drudgery.

It is not an uncommon sight to see the very old up with the break of day, bustling about as though their two hands were their only means of support, while a dozen depending ones were looking to them for food and clothing. Then we say, "drudgery, perfect drudgery," and declare that when we are in their time of life we will take things easy.

It would be a hardship for these old persons who have spent so many years of activity to settle down with folded hands, waiting for the end. Let them busy themselves as they think best, and rest assured if they work from choice it is not drudging. We that are not fond of sewing look pityingly upon the seamstress that plies her needle the livelong day and far into the night that a promised costume may be finished on time. We say of her: "She's drudging," when maybe the greatest pleasure of her life is the making of beautiful clothes. Perhaps she doesn't think of aching shoulders, such as we associate with a day's steady sewing.

Another will meet the farmer's wife, or the farmer himself, and say: "Why do you drudge away on the farm when you are so able to retire?" Then the true reply, if you are in love with nature and a quiet home, will be often unspoken, and you will put this well-meaning friend off with some light answer that really says nothing, for you would not wound him by remarking such unwelcome sympathy (or, perhaps, pity is the word), for they surely have never lived on a farm, therefore do not know the charm of rural surroundings.

This would be such a one-sided world if we all found pleasure in a single occupation, if a certain quarter attracted to the exclusion of others just as good, only as we must all be at the same place and perform like labor, these other places had as well not exist.

We are as diverse in our likes and dislikes as though we were brought up in different worlds. A certain thought or flower appeals to one, while neither will leave an impression on another coming in contact with them.

These very facts should teach us that liberality and broad-mindedness are the two factors that save us from becoming pessimists, and we must cultivate them that they may thrive within us, or soon we will be dolefully asserting that "things have changed since I was young." I'm glad they have changed, for if the past few years had been years of professed anarchy, those preceding might have been void of inventive strokes, and "today's labor" might be clowning with a "yesterday's" and we—well, we might not have had a "stockings." It probably would be a little early for our countrymen. And besides, what was racing and recreation for our ancestors, now is a laboratory for us. Some of the older mothers are never happier than when to "trip the star," "basket," or

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other old-time favorite quilts—this was true of my own mother, and her last stitches are in the unfinished quilt placed in the frames only a few days before she left us, while folded away in closets were more than she could have worn out in years.

This wasn't drudging, for she delighted in it, but it would be the severest drudging in the world for me to sit day after day quilting. Temperament and inclination must be consulted when we enter any vocation. The thoughtless parent dooms his child to drudging by compelling it to labor at uncongenial tasks all of the time. Necessary household duties are not always pleasant to us, and the members of the home should bear this in common; but the hours not thus used should be devoted by each one at congenial employment.

If one daughter wishes to be a musician, and is eager to practice during her spare minutes, don't compel her to sew for the mere sake of sewing, for she will never be an indifferent seamstress, while if permitted to go on with her musical studies, she will be able to earn far more, and as it is labor she loves, there will be no drudging when she comes to earn her way in the world of this be her object in acquiring proficiency in music, but if she studies it simply because of

her love for it, without thought of using it as her refuge in adversity, it will ever be to her a source of pleasure to know that, should she be placed upon her own resources, the way lies beautiful and clear before her.

Now, if the parents had insisted that she learn dressmaking, or become a school teacher, and these are distasteful to her, she may become tolerably proficient in what she has been compelled to do, but it will ever be drudging to her, and the very thought of being thrown upon her own resources will give her much worry, for she sees nothing but drudging ahead.

It is the attitude of the mind toward one's daily work that makes it drudging or a joy.

We may advise, but it is a sin to coerce one's children in the selection of life occupations.

We sometimes get the concerted idea into our heads that we have been peculiarly gifted with foresight, and so know best what is the proper lifework for our sons and daughters. This is merely the outcropping of the egotism within us. We have desires and ambitions for their welfare, but let us be reasonable and not doom the child to a life of drudging to satisfy our pride, for, if undrugged, pride is apt to fall

Some Examination "Howlers."

The "Witangemot" was the Saxon Parliament; it meant "Council of Wise Men." They very soon called it the House of Commons.

The Doomsday Book was the book in which were written the names of people doomed to be burnt at the stake in the reign of Mary I.

The Magna Carta was the man who made the people bring out their dead during the Plague of London in the reign of Charles II.

Joan of Arc was the wife of Noah, who saved many people and animals from the flood in his arc.

Animals that can live on land and in water are called amphibious. The sycophant is one of these.

Runnymede was the name of a great battle between the Medes or Persians, and the Greeks. The Greeks won, and sent a herald, called Marathon, running to the city to tell the good news. He ran 26 miles without stopping, and fell down dead after giving the message. The races are called after him.

Archimedes invented a screw which Richard used to torture the rich Jews, to make them give him money for his Holy Wars.

Galileo first made the earth go round the sun.

The Diet of Worms was what the Monks ate in the Middle Ages during Lent. At Easter they were allowed to again eat beef, which was called the Pope's Bull.

In the Middle Ages all noblemen had the great privilege of having their heads cut off, the poor people had to be hanged whether they liked it or not.

Wolsey was a Cardinal who was killed by order of Henry VIII. in Canterbury Cathedral. He caused the King much trouble, and never changed his shirt for years, so he was very tired of him.

The King's Highway.

It was a dusty country road
That dipped between the flowers,
And over it the sunshine poured
Through all the daylight hours.

The butterfly with wings of gold
Swung swift behind the bird;
The south wind, like a river, rolled
Above the grass, unheard.

The spider webs were lightly flung
Above the hedges there;
The scent of violets rose and hung
Upon the drowsy air.

No voices woke the air with mirth,
No footfall shook the soil—
And all day long the silent earth
Was bound by dreams to God.

—Edward Wilton Mason, in "The Craftsman," September

The Magic of the Forest.

By Temple Bailey.

Vaille was telling a story to the Small Girl. They sat on the porch of the hotel in two big rocking-chairs. The Small Girl had a perky pink bow on the top of her head. Vaille wore her hair in a shining swirl held by two small shell pins.

"And the Prince carried the Princess into the depths of the beautiful forest where the birds sang and the leaves rustled and the little stream murmured, and they lived happy ever after."

The Small Girl drew a breath of rapture. "Did you ever go into the depths of a beautiful forest?" she asked.

Before Vaille could answer, a deep voice boomed, "She wouldn't go into a forest if she could help it. The modern Princess prefers city streets."

Vaille's head went up. "Life isn't a fairy tale," she said. "I might like a castle in a forest, but not a cottage."

The Small Girl meditated. "But the Princess loved the Prince a whole lot," she said; "I guess she'd have been happy anywhere with him."

The eyes of the man and the girl met. "Oh, of course, that—" Vaille murmured.

"It makes a difference—whether she loved him," the man said, and sat down on the steps at Vaille's feet.

The Small Girl demanded more fairy tales, but Vaille was tired. "You let Mr. Hoosier tell them."

The man's eyes lighted up at her use of the child's pet name for him. Vaille was of the East and he was of the West, the great Middle West, conquered by the ancestors whose pioneer strength had come down to him and was shown in the breadth of his shoulders and the straightness of his figure.

Mr. Hoosier's fairy tales were different from Vaille's. They did not deal with princes and princesses, with gnomes and dwarfs. He told, rather, of the lambs in spring, all white and weak-kneed, of squirrels and of rabbits, of pussy cats and of kittens, ending with a fascinating tale of the frogs he had tamed in the pond.

"Well, mine are the real ones," Mr. Hoosier said. "And some day I'll tell you nicer ones, of life on the mountains where the winds sing you to sleep at night and the busy world is miles away."

His eyes went toward the low line of the hills as he spoke, and Vaille asked abruptly, "Are you going to waste the rest of your life buried among the trees?"

He nodded. "If you call it wasted, I studied forestry because I love it. My father wanted me to study law. He made his fortune working for corporations, and he wanted me to follow in his footsteps, but—I love the trees—it is my life."

"But to live always away from the world—how can you stand it?"

He smiled. "Are you happy in your world?"

"Of course," she faltered. "That is—nobody is really happy."

"Except the Prince and Princess," the Small Girl interposed; "they lived happy ever after."

The man picked up the Small Girl and set her on his shoulder. "But princesses in these days," he said again, "don't do such foolish things."

Then he carried the Small Girl off to her mother, and Vaille sat and thought about the things he had said.

The night before he had asked her to marry him. She had said "No." She had not denied that she loved him a little, that she might love him more. But he was not of her world. All her life she had danced, and dined, had spent her summers in a cottage at Newport, and her winters cruising in tropic seas. And now this man asked her to leave her world and to enter his, to go with him into the depths of the dim Northern forest.

She wished that chance had not brought her to this hotel, set so near the fastnesses of the forest that was his domain.

She resolved that she would leave next morning, but the aunt who chaperoned her was ill, too ill to be carried off to a hotel.

Vaille's remark, at the delay, made the little lady comfortable, left her with a guess and went off for a ramble with the Small Girl. Almost instinctively they followed the path to the forest. Half way they met another man who

wanted to marry Vaille. He was essentially a man of her own kind, a man from the city, rich, unromantic, but desiring her very much.

"Where are you going, my pretty maid?" he asked lightly.

She was not sure, she said. Her manner was not inviting, but he refused to notice, and continued the quotation, "May I go with you, my pretty maid?"

She told him "No" flatly. "I am going to tell fairy tales to the Small Girl as soon as we reach that shady place under the trees. And you would be bored; you don't like fairy tales."

"I'd like to carry a certain princess to my castle," he said; "and some day I'll do it."

At the note of security in his voice, Vaille flung up her head, her eyes flashing. "Your castle would be a prison."

He laughed again. "You better think it over. I'd let you lead the life you like—dinners and dances, and nothing to do."

Vaille caught her breath at his estimate of her. This man always made her feel like a useless toy; to the man of the forest she was a being with all the great possibilities of womanhood.

"Go away," she said, and turned from him. Then she called back over her shoulder, "Please tell Aunt Serena that I may not be back until afternoon. I have some crackers in my pocket, and the Small Girl and I are going to look for berries to add to our lunch."

The Small Girl was rapturous in the quest of adventure. They found berries, and Vaille told fairy tales while they ate their simple meal. After that they explored the forest. It was a place of mystery and of charm. On and on they went, so happy in little discoveries of red berries or frail flowers that they did not notice the darkening of the light, and they failed to hear the low moan of thunder or to heed the fitful rushes of wind that stirred the leaves.

Thus the storm came upon them, suddenly. The Small Girl screamed as a flash of lightning made everything gold, and then left the darkness of early twilight.

Vaille picked up the Small Girl and started to run. She realized that they had gone deep into the wilderness and that the hotel was too far for them to reach. There seemed to be no shelter anywhere. The big trees that a moment before had seemed so protecting, now seemed a menace. A second crash of thunder made her stand still and clasp the Small Girl tightly. The wind came then and the rain. Vaille's bronze hair was blown about her shoulders, and her white gown was drenched. The Small Girl shrieked without stopping, "I am frightened; oh, I am so frightened!"

It was almost dark, and Vaille's eager eyes, searching for shelter, saw in the distance a spark of light. It looked like the glow of a candle or of a lamp set in a window, yet so thick were the trees and undergrowth that she could see no sign of habitation. Into the chaos of her mind came the thought of the fairy tales she had been telling the Small Girl. Was this a witch's hut, or an ogre's castle? She ran toward it, the Small Girl in her arms. About them was the crash of trees, the roar of the wind, the swish of the rain. The door of the little house was open, for it was a little house built of stone and of logs in modern bungalow fashion. There was a wide porch; and the glow that Vaille had seen was the light of burning wood in an open fireplace.

Vaille rushed in, set the Small Girl on the floor, and shut the door against the tempest. The quiet of the big room after the uproar without seemed heavenly. The Small Girl, her pink topknot all drenched and flattened, looked at Vaille with big eyes. "Is it the house of the three bears?" she whispered.

Vaille laughed nervously. "Maybe," she said. "We'll see if we cannot find the soup, and then we'll run away before they get home."

"Won't it be lovely?" said the venturesome Small Girl. "We'll eat the soup and rock in their chairs and go to sleep on their beds, and the storm will keep them away, so they won't know it."

There was no soup in the little kitchen; but a great refrigerator of modern build held bottles of cream, butter that smelled like clover, and honey. In the pantry were fresh bread and spice-cake.



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Vaile and the Small Girl sat in front of the fire and ate a satisfying meal while they dried their clothes. The Small Girl was in a state of rapture. "I feel like Goldilocks," she said; "but what if they should come and catch us, Vaile?" "They won't come in a storm," the other comforted, and when the Small Girl had finished Vaile took her into her arms and rocked her to sleep.

"May I sleep on the little bear's bed?" the Small Girl asked, and Vaile said "Yes."

With the Small Girl safely asleep, Vaile began to explore the bungalow. It was not the home of a poor man. The rugs, the furniture, the few good pictures, the books in the low bookcases proclaimed good taste and culture, as well as adequate means. In the room where the Small Girl slept were evidences of a man's occupancy. There was about it an almost monastic simplicity. On the plain mahogany dresser was a silver frame with little doors. Led by curiosity, Vaile opened the doors and her own face stared out at her.

And then Vaile knew to whom the house belonged. From room to room she went, seeing in each one some evidence of the man's love for her. In the dining-room, stuck in a crystal vase, was

a faded pink rose she had dropped from her hair the night before. On the table in the living-room was a magazine on which she had scribbled her name. And when she opened it she found a bit of fern that she had picked idly to mark her place.

She closed the book and went to the window. Vaile opened the lattice and leaned out. There came to her all the fragrance and freshness that follow rain. It seemed to her that life as she had lived it, was not to be compared to life as it might be lived here. To marry the man of the world was to go back to little things; to marry the man of the forest would be to see new truths, new reasons, new values.

It was as if some magic had waked up the primitive in her; she became at once the woman of the home, of the hearthstone—the woman made for love—

At this supreme moment he came—the man of the forest. His big form filled the doorway.

"You?" he asked, breathlessly.

She held out her hand to him, smiling.

"The Princess came—to the forest?"

Something in her voice revealed the truth, "You came to me?"

"The storm brought me," she parried.

Then suddenly serious, "It was fate."

As he drew her within the circle of his arm the Small Girl piped from the stairway, fearfully, "Is it the Big Bear?"

But Vaile, hastening to reassure her, proclaimed, "It is the Prince who carried off the Princess—and they lived happy ever after in the depths of the beautiful forest."—Pictorial Review.

BOOK REVIEW.

A GOOD BOOK ON HORSE-BREEDING.

"Studies in Horse-breeding," by G. L. Carlson, has just reached our desk. A careful perusal of this book proves it to be very interesting and instructive. It should be a valuable work for stallion-owners and for all breeders of horses. A study of it will explain to the ordinary breeder many things not now generally understood. The book is clearly written by a man who has made a special study of his subject, and bases his statements upon a broad, well-used experience, harmonized with the best light of science. While there may be a few points on which veterinarians may disagree with the author, yet, in the main, the conclusions are undoubtedly safe. The author throws more light on artificial impregnation than is to be found

elsewhere very readily. The book contains sixteen chapters, all of which are full of valuable ideas, and sixty-seven instructive illustrations. This book should be of real value to all breeders. It is obtainable through the office of "The Farmer's Advocate," at the publisher's price, \$2.00, postpaid.

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On account of above event, return tickets will be issued at Single Fare, via Grand Trunk System, from all stations in Canada, west of Cornwall and Ottawa. Good going August 27 to September 10, inclusive. Return limit September 13. Special low-rate excursions will also be run on certain dates. Full particulars and tickets from any Grand Trunk Agent.

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Some day he'll learn,
That no one offers a reward
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It is assimilated at once without effort.

BOVRIL is essentially a summer food.



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If a gasoline engine is worth buying, it is worth thinking about, worth studying into. The reasons are

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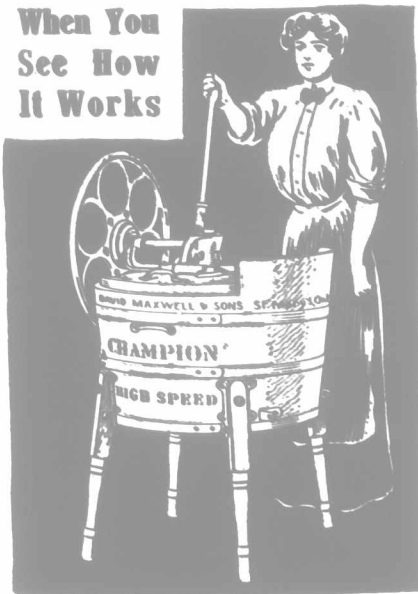
will appeal to you are the same that have induced thousands of shrewd, practical farmers to look into the engine question carefully, to investigate the Olds and then select it because it was exactly what they needed, and the price was right for what they got.

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you will want a "CHAMPION" Washing Machine right off. The Momentum Balance Wheel, which almost runs itself—the up-and-down stroke of the Lever, which means greatest power with less effort—the absolute perfection of the "CHAMPION"—will make you want one for your home.

"Favorite" Churn gets all the butter out of the cream. Easy to churn, too. If your dealer does not handle these home necessities, write us.

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Don't Throw it Away



They mend all leaks in all utensils—tin, brass, copper, granite, hot water bags, etc. No solder, cement or rivet. Anyone can use them: fit any surface, two million in use. Send for sample pkg., 10c. COMPLETE PACKAGE ASSORTED SIZES, 25c. POSTPAID. Agents wanted. Collette Mfg. Co., Dept. K Collingwood, Ont.

ADVOCATE ADVERTISEMENTS PAY.

QUESTIONS AND ANSWERS. Miscellaneous.

TO KILL LILACS.

Can you tell me how to kill lilacs? Would a liberal dose of salt answer the purpose? Mine are between large shade trees. Would the salt used on the lilacs kill the shade trees? L. W.

Ans.—It would require a very heavy application of salt to effect the purpose, and the dead shrubs would be unsightly. Why not dig around and cut the roots off, then pull them out with a team and chain. Any sprouts that may come up afterward could be cut off with a sharp spade or an axe.

LAME HORSE.

I have a horse which is stiff in front feet; I think his feet are contracted. I have tried keeping his feet in blue clay, but it does not seem to do any good. He has never been driven very much. What would be good for him? R. G.

Ans.—Your horse has, undoubtedly, contracted navicular disease, which is too well known to need any comment. Treatment is generally more or less unsatisfactory. Poultices to the feet for, say 48 hours, followed by mercury blisters in the hollow of the heel and around the coronet, is the best line of treatment, but will need to be repeated at frequent intervals.

SILLO QUESTION.

1. What size concrete silo would be necessary to contain sufficient silage to feed 10 cows, 5 horses and 7 pigs, through the winter, namely, 6 months?

2. How many tons would be contained in said silo?

3. What is principally used in making silage?

4. Could the following, namely: potato stalks, potatoes, turnip leaves, turnips, cabbage, green fodder, any vegetable leaves, and brewers' grains, be used?

5. Is there any special way in which silage should be made, and should it be kept fairly air-tight?

6. About how much salt per ton would you use?

7. Could green hay be mixed with silage?

8. About how much of said mixture would be sufficient for one feed?

9. What is the cheapest and best method of making a concrete silo? Newfoundland. C. W. G. T.

Ans.—1. A cylindrical silo 15 feet in diameter and 23 feet high, will furnish plenty of feed for the number of animals you state. Would recommend, however, that you build it from 25 to 30 feet high, to supply feed for more animals should you wish to increase the number of head retained, or to feed in a dry time in summer, as silage will keep good for years.

2. A silo 15 x 23 will contain 71 tons.

3. Corn, preferably harvested when nearly ripe.

4. None of these can be used in making silage.

5. Silage is made of the entire corn-stalks, cut into lengths of from 1/2-inch to 2 inches (preferably about 1-inch long). This is well tramped into the silo, which must be, and, being built of concrete on a concrete foundation, is, air-tight, providing care is exercised in the making of the doors. When filled, the silage heats or ferments, and, forming a layer of decomposed matter on top, automatically seals itself, thus rendering the whole mass air-proof. This air-tight condition is essential; otherwise the whole mass will rot. Feeding from the silo should not begin until about three weeks after filling.

6. No salt is used.

7. Clover and alfalfa have been mixed with corn in making silage with moderate success.

8. A milk cow of average size will eat from 30 to 50 pounds per day.

9. The cheapest cement silo probably is of the solid-wall type, reinforced with heavy wire, such as No. 9, or with bars of iron. The hollow cement-block structure is looked upon by many as being more frostproof, and, consequently, more desirable, but both are good.

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World's Grandest Work Shoes.

These shoes are our own invention. The soles and an inch above, all around, are pressed out of one piece of light, thin, springy, rust-resisting steel.

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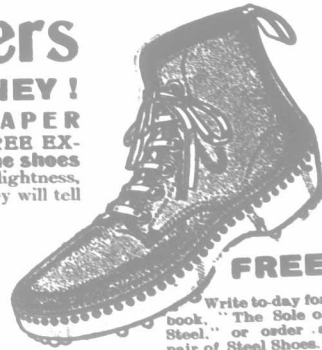
The bottoms are corrugated, making them 100 per cent stronger than before, and are studded with adjustable Steel Rivets, that take the wear and give a firm foothold. When Rivets are partly worn, replace them with new ones, by hand. Extra Rivets cost 30 cents, and should keep shoes in repair for two years at least.

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One pair outlasts 3 to 6 pairs best all-leather work shoes. They are stronger, lighter, better, more comfortable and economical than leather shoes. They absolutely do away with corns, callouses, bunions and swelling of the feet! Give splendid protection against coughs, colds, rheumatism, sciatica, etc., by keeping the feet bone-dry in spite of mud, slush or water. Uppers are of finest quality pliable waterproof leather, joined to the steel by non-rusting metal rivets, making water-tight seam.

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Steel Shoes, 9 inches high, extra grade of leather, black or tan color, \$4.00 per pair.

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FOR BOYS SIZES 1 TO 5. BLACK ONLY.

6-inch high shoes, \$2.50 per pair. 9 inches high, extra grade of leather, black or tan color, \$3.50 per pair.

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OUR NEW IMPORTATION just arrived. 32 Percherons—20 stallions, ranging from 2 to 5 years. All by best sires in France. Carefully selected.

Can supply buyers with stallions that are breeders, at prices below competition. We

have several horses that weigh a ton, with the best of bone and action.

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Also 3 German Coach Stallions. All excellent types of this favorite breed of horses. Correspondence and inspection invited.

R. Hamilton & Son,
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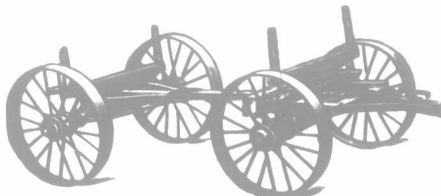
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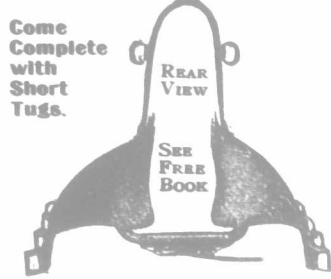
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Every horse-owner who will now consider the practical in valuable time and horseflesh by using a set of HUMANE HORSE COLLARS to prevent all collar troubles, will certainly buy a set with his spring harness. Or get a set to cure your sore horses while they work. The success of the HUMANE HORSE COLLARS for the past three years proves this. Investigate.

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Clydesdale Stallions and Mares I have still some extra good Clydesdale stallions and fifteen imported and registered mares. The mares have all been bred, are all up to a big size, 2 and 3 years old, and are of choice Clydesdale breeding. C. P. R. and phone connection.

T. H. Hassard, Markham, Ontario

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College Re-opens September 30th, 1910
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JOHN A. BOAG & SON, Bayview Farm, Queensville, Ont.

IMPORTED CLYDESDALES AND HACKNEYS In my stables at Ingersoll, Ont., I have always on hand Clydesdale stallions and fillies, and Hackney stallions, personally selected in Scotland for their high-class type, quality and breeding. Let me know your wants.
W. E. BUTLER, INGERSOLL, ONT.

IMPORTED CLYDESDALE FILLIES I have still on hand six Clydesdale fillies. They are big, smooth fillies, exceptionally well bred, and their underpinning is the kind Canadians like. I have only one stallion left, a right good one. My prices are as low as any man's in the business. Phone connection.
GEO. G. STEWART, HOWICK, QUEBEC.

ORMSBY GRANGE Duncan McEachran, F. R. C. V. S., LL. D., Etc., Proprietor. STOCK FARM. The June importation being immediately disposed of, to fill numerous ORNSTOWN, QUE. orders a large consignment of yearling and two-year-old Clydesdales will arrive at the end of September. Special orders will be executed at minimum cost. Everything so far imported by us has given unqualified satisfaction as to quality and price.

Imported Clydesdales My new importation of Clydesdale stallions for 1910 have arrived. They were selected to comply with the Canadian standard, combining size, style, quality and faultless underpinning with Scotland's richest blood. They will be priced right, and on terms to suit. C. W. BARBER, GATINEAU PT., QUEBEC.

SMITH & RICHARDSON are in Scotland at present purchasing more Clydesdales. Watch this space for further announcement. Myrtle, C. P. R. Brooklin, G. T. R. Phone.

SMITH & RICHARDSON, COLUMBUS, ONTARIO.

CLYDESDALE FILLIES OF QUALITY Our new importation of 12 fillies have arrived at our stables: 1, 2 and 3 years of age. Superior type, character, breeding and action, coupled with the flashiest kind of quality, are their outstanding merits. All are for sale.
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Mount Victoria Stock Farm, Hudson Heights, Quebec. Champion Clydesdales and Hackneys. We have for sale 2 Imp. Clydesdale stallions, by Duke of Blenheim and British Chief; 2 Imp. Hackney stallions, by Copper King and Termination Temple bar. For examiners. Prices right. Long-distance phone.
T. B. Macaulay, Proprietor. E. Watson, Manager.

For Sale: Reg. Hackneys All Ages. Write for prices. GILL & ASKIN, Cooksville, Peel Co., Ont.

QUESTIONS AND ANSWERS. Miscellaneous.

MARATHON RACE.

Kindly let me know the distance driven, the time made, and the amount of prize money of the Marathon Coaching races won by Alfred Vanderbilt at the Olympia and Richmond Shows this summer.

H. M. D.

Ans.—The distance of the Olympia Marathon race, 1910, was 10 1/4 miles, and the time made by Mr. Vanderbilt's four-hand team was 43 minutes. We find no record of the amount of prize money.

STEER FEEDING.

1. How much silage, hay, chop, and straw, should be fed feeding cattle while fattening? Also how much weight would an average steer or heifer take on, in five months' loose feeding, on the ration which is asked for in first question, supposing steer to weigh 700 lbs. at start?

2. How many tons corn will a silo 34 feet high by 22 feet wide contain, tramped down?

3. Would it be profitable to purchase a farm of 100 acres, and keep 50 acres in permanent pasture, growing corn and hay, buying oil cake, and taking in 100 steers to fatten and sell in winter?

York Co., Ont. K. S.

Ans.—1. A seven-hundred-pound steer will consume from 20 to 30 pounds silage per day, depending upon amount of grain fed. You may start on 20 pounds, and regulate beyond that by the steers' appetite. The amount of chop depends somewhat on its kind, and on the feeding period; that is, whether you intend to finish the steers in four to five months, or in about nine months. A short-keep steer needs to have about all the chop he will clean up with a zest, and should be worked up to about fourteen pounds per day. A long-keep steer should be fed around ten pounds per day. Fed what straw he will eat. Three hundred to three hundred and fifty pounds, would be excellent gains.

2. A silo 22 feet in diameter and 34 feet high will contain about 247.5 tons of silage.

3. It might be profitable, but a rotation of the fifty pastured, would be better. It all depends on the man.

SPLINTS—ALFALFA FOR SEED

1. I have a two-year-old colt of the Coach breed; took swellings or lumps on her legs, below the knee joint, after being out to pasture. What treatment shall I give?

2. My mare foaled, and I lost the colt in less than two days by constipation of the bowels. The mare seems stiff on her hind legs ever since, and does not thrive the way she should on the feed she is getting. She is on grass the most of the time. What should be done?

3. How would you kill her lice on horses?

4. Let me know how to save alfalfa clover for seed. How to cut it, whether with binder or mower?

SUBSCRIBER.

Grey Co., Ont.

Ans.—1. The lumps you mention are, no doubt, splints, are an ossification on the antero-internal part of shin bone. If the colt is not lame, no treatment is necessary, as the lumps are solid bone, and cannot be reduced by medicinal means. If the colt is lame a blister should be applied.

2. In foaling, the mare probably sprained some of the sub-lumbar muscles, or she may be slightly rheumatic. It is a little difficult to tell from this distance what the stiffness is due to, and until that is determined it is useless to suggest treatment. Would advise a professional examination by a competent veterinarian.

3. Lice are easily and effectively destroyed by the free application of any of the many preparations of tar oils, such as Zenoleum, in the strength of two tablespoonfuls of Zenoleum to one gallon of water. Thoroughly scrub the horse all over with the preparation, and repeat in seven days.

4. If the crop is high enough to use a binder, it works very well. Sometimes a mower, with a drag table, is used, raking the hay off the table and out of the way of the machine on its next round.

HORSE OWNERS! USE GOMBAULT'S CAUSTIC BALSAM.

A safe, speedy and positive cure. The safest, Best BLISTER ever used. Removes all blemishes from horses. Impossible to produce scar or blemish. Send for circulars. Special advice free.

Ring-Bone

There is no case so old or bad that we will not guarantee Fleming's Spavin and Ringbone Paste to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 5-minute applications cure. Works just as well on Sidebone and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of Fleming's Vest-Pocket Veterinary Adviser. Ninety-six pages of veterinary information, with special attention to the treatment of blemishes. Durably bound, indexed and illustrated. Make a right beginning by sending for this book. FLEMING BROS., Chemists, 75 Church St., Toronto, Ontario

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Seldom See a big knee like this, but your horse may have a bunch or bruise on his Ankle, Hock, Stifle, Knee or Throat.

ABSORBINE will clean them off without laying the horse after horse up. No blister, no hair growth. \$1.00 per bottle, delivered. Book \$1.00 free. ABSORBINE, JR., for manking, \$1 and 5c. Removes Painful Swellings, Enlarged Glands, Gout, Wens, Bruises, Varicose Veins, Verrucae, Old Sores, Always Pain. Your druggist can supply and give references. Will tell you more if you write. Book free. Manufactured only by W. F. YOUNG, P. O. Box 58 Temple St., Springfield, Mass. Canadian Agents: Lyman's Ltd., Montreal.

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Always on hand, stallions, colts, mares and fillies. The champion stallion, "Baron Howes" (13847), was purchased from this stud. Apply: JOHN R. BEATTIE, Baurch Farm, Annapolis, Scotland

Peachblow Clydesdales and Ayrshires!

CLYDES—2 four-year registered stallions, one imported, AYRSHIRES—3 very choice bull calves, all registered. All good colors, and from good milking dams. Prices right.

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AGENTS 200% PROFIT Handy, Automatic HAME FASTENER

Do away with old hame straps. Horse owners and teamsters will about them & Fasten instantly with gloves on. Outwear the harness. Money back if not satisfactory. Write today for confidential terms to agents. F. Thomas Mfg. Co., 744 Wayne St., Dayton, Ohio

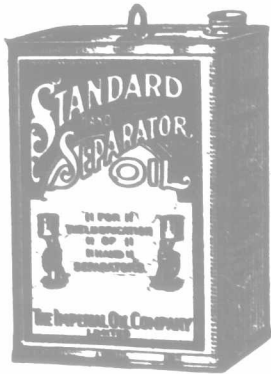
Imported Clydesdales Imported and Canadian-bred Clydesdale mares and fillies and young stallions, of most fashionable breeding, up to a big size, with character and quality. Phone connection. ALEX. F. MCNIVEN, St. Thomas, Ont.

Sapleigh—Ah, speaking of the electric city, that makes me think—

Miss Keen—Really, Mr. Sapleigh? Isn't it remarkable what electricity can do?

The Full Percentage of Cream

Getting the full percentage of cream from milk depends as much upon the oil used to lubricate the separator as upon the separator itself. Gummy oil will cut the fine bearings of your machine, spoil its balance and waste good cream in the skim-milk pail.



STANDARD Hand Separator Oil

never gums, never rusts, never corrodes. It feeds freely into the closest bearings and insures the perfect lubrication that is essential to the free spinning of the bowl and the complete separation of cream from milk. It lessens the driving effort and lengthens the life of your separator.

One gallon cans. All dealers. Or write to

The Imperial Oil Company, Limited
Ontario Agents: The Queen City Oil Co., Ltd.

It Works While They Work

If horses go lame, you don't have to lay them off to cure them. Kendall's Spavin Cure works while they work—and cures them while they earn their keep. For Spavin, Curb, Ringbone, Splint, Sprain, Swollen Joints, Lameness

Kendall's Spavin Cure "Completely Cured Him"

Moose Jaw, Sask., Oct. 13th
"Two years ago, I bought a colt that was badly spavined, and completely cured him with only two bottles of your Spavin Cure. Worked him steady all the time and sold him last winter for a top price."

Howard Brock,
Also famous as the standard family liniment \$1. a bottle—6 for \$5. Ask your dealer for free copy of our book "A Treatise on The Horse," or write us. 53
DR. B. J. KENDALL CO.,
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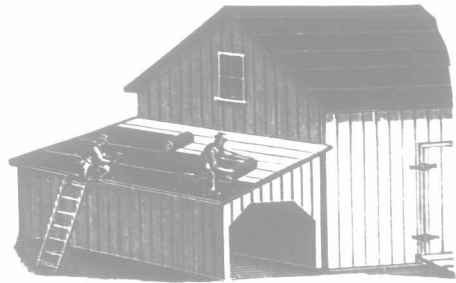
Money in Ditching



Every farmer and thresherman knows the value of a time-saving machine such as a harvester. We want YOU to know the money-making qualities of the BUCKEYE TRACTION DITCHER. It cuts 100 to 150 rods per day, and saves 25 per cent. to 50 per cent. of the cost of handwork. Are YOU interested— anxious to earn more money? Write TO-DAY for catalogue "T." Remember, the first man in your vicinity to use a BUCKEYE will make the biggest profits. Address:

Sales Department,
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Mica Roofing



For steep or flat roofs, waterproof, fire-proof; easily laid; cheaper than other roofing. Send stamp for sample, and mention this paper.

HAMILTON MICA ROOFING COMPANY,
101 REBECCA STREET HAMILTON, CANADA.

QUESTIONS AND ANSWERS. Veterinary.

LAME CATTLE.

Shortly after going on pasture, three of our cattle went lame on one fore foot. The soreness appears to be just above the hoof, but there is no swelling. The cows sometimes hold their feet up as if in pain.

J. S. McC.

Ans.—This is probably foul in the feet. Keep the cows in a dry, comfortable, well-bedded stable, cleanse between the clouts, and apply a poultice of warm linseed meal. Change the poultice about every six or eight hours until the soreness disappears. If there be any raw surface between the clouts, dress three times daily with carbolic acid one part, sweet oil twenty parts.

PERIODIC OPHTHALMIA.

Last winter my sixteen-year-old mare became dim in one eye. I treated with a solution of boracic acid, but she became blind in it. Now the other eye has a scum over it. Her two-year-old colt also has a scum over one eye. Is it contagious?

B. S.

Ans.—This disease is not contagious, but the predisposition is congenital; the colt inherited the tendency from the dam. It is a constitutional disease, and appears at intervals without apparent cause. After a few attacks, blindness from cataract usually appears. All that can be done is to treat each attack. Give a laxative of 1½ pints raw linseed oil. Keep in a darkened stall, bathe eye well with warm water, three times daily, and after bathing put a few drops of the following lotion into the eye, viz.: Sulphate of zinc 15 grains, fluid extract of belladonna 20 drops, distilled water 2 ounces.

STRANGLES.

Mare's lips swelled and skin peeled off in spots. There is a copious yellowish discharge from nostrils. She coughs and breathes heavily. The mouth is sore and the glands of the neck swollen. Her throat is so sore she has difficulty in swallowing. The swelling under the jaws broke, and is discharging matter.

A. H. H.

Ans.—This is a serious case of strangles, or distemper. Hot poultices should be applied to the throat, and the abscesses should be lanced as soon as pus forms, and the cavities flushed out three times daily with an antiseptic, as a five-per-cent. solution of carbolic acid. When the abscess forms in the throat, there is danger of suffocation, and it must be lanced early. As there are many blood-vessels and other important organs in the region, a veterinarian should operate. The patient requires internal antiseptics, as 6 drams hyposulphite of soda, three times daily. Do not try to drench; give powders with a spoon, and liquids with a syringe. As she cannot eat, give new milk, raw eggs and whiskey to drink, or administer with a syringe. This is a serious case, and, if possible, should be placed in the hands of a veterinarian.

Miscellaneous.

LONDON MARKETS.

I would like to see the London markets in your paper. P. A.
Huron Co., Ont.

Ans.—We cannot insert the London markets in our issue on account of their local value.

SICK TURKEYS—ROUP.

Have turkeys which seem to have a disease among them. Large white lumps gather around the eyes and nostrils. There is also a discharge from nostrils. Could you give a remedy; also state a cause for disease. MRS. E. W.

Ans.—This swelling of the head around the eyes denotes roup. This starts first from a cold, unless the flock has mixed with another suffering from the same disease. The first symptom is a slight puff between the eye and nostril. This indicates a slight cold, and may pass away in two days. If it does not leave in that time, it is advisable to cut off the head and bury it, no matter how valuable the individual. Roup is very hard to combat, spreads by contagion, and since birds do not die quickly of it, it is all the more dangerous.

Lump Jaw

The first remedy to cure Lump Jaw was

Fleming's Lump Jaw Cure

and it remains today the standard treatment, with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in Fleming's Vest-Pocket Veterinary Adviser.

Most complete veterinary book ever printed to be given away. Durable bound, indexed and illustrated. Write us for a free copy. FLEMING BROS., Chemists, 75 Church St., Toronto, Ontario

3½%

You might better place your savings here where they will earn 3½%, instead of 3%. Security, \$2,000,000 assets.

AGRICULTURAL SAVINGS & LOAN CO.,
109 DUNDAS STREET,
LONDON, ONTARIO.

Balmedie Poiled Angus and Oxford Down sheep — Offering several exceptionally nice heifers, and a few young bulls. Discriminating buyers will be pleased with my herd. Anything in the herd will be priced. Also ram and ewe lambs. T. B. Broadfoot, Fergus P. O. and Station

Aberdeen-Angus Cattle—Stock all ages, good strains, at reasonable prices. Apply to ANDREW DINSMORE, "Grape Grange" Farm, Clarksburg, Ont.

ABERDEEN - ANGUS

Will sell both sexes; fair prices. Come and see them before buying. Drumbo station.
WALTER HALL, Washington, Ont.

Excited Son—Ye've hooked a grand big one this time, father.
The Angler—O, aye! I expect the fish is a' richt, but I'll feel mighty relieved when I get that half-a-croon fly scarce out o' his mouth.

Suffered from Heart Trouble and Nervousness for Six Years

Lost All Desire To Live.

WAS FINALLY CURED BY THE USE OF MILBURN'S HEART AND NERVE PILLS.

Mr. Regis Lavallee, Sorel, Que., writes: "For six years, at least, I suffered from heart trouble and nervousness which took from me all desire to work and even to live."

"When I found myself in this condition and getting worse I took the medicine the doctor prescribed for me but without any result."

"One evening I was reading the paper when I saw your advt., so cut it out and the next day went to the druggist and procured a box, and since that time my nervous system has been in perfect condition."

"Be assured, gentlemen, that I will never be without Milburn's Heart and Nerve Pills for they gave me strength to work and support my mother, who is an infirm widow and of whom I am the only support."

Milburn's Heart and Nerve Pills are 50c per box, or 3 boxes for \$1.25, at all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

SUCCESS-MANURE-SPREADERS

are made right here in Canada

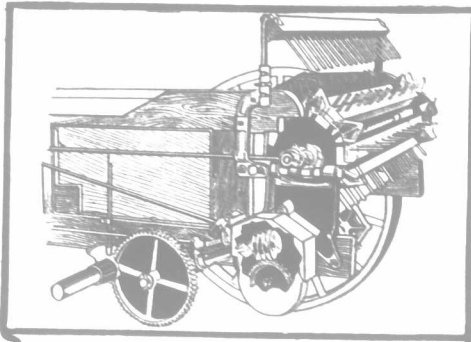
Need you guess twice about the motive?—when anyone tells you that the up-to-date manure spreader—the aptly-named SUCCESS—is no longer made in Canada. Just you investigate. Just write the Dain people. Do that before you put a dollar into any manure-spreader investment.

YOU WILL PROFIT.

The Canadian-built, moderate-priced SUCCESS is paying dividends to hundreds of progressive farmers. All over Canada it is giving its owners an increase of two to four dollars value a ton on stable manure used as fertilizer. It will do as much for you.

JUST WRITE US.

Quit wondering which make to choose. Write us for PROOFS—not mere claims—and then decide wisely.



Here you see the independent (worm and gear) drive that makes the SUCCESS distribute evenly uphill or down. No other spreader even claims this. The SUCCESS does it. Ready for prompt Fall shipments. No delay.

ASK FOR MORE FACTS

Dain MFG. CO., LIMITED
90 Dain Ave., Welland, Ont.

With the SUCCESS you can make one load of manure fertilize more ground than three loads would spread the ordinary way. And the SUCCESS will actually save \$4 a day for you. Save that much every day you use it!

MAKE US PROVE.

Tell us to show you why YOU would gain, and gain big, with a SUCCESS Manure Spreader. Require proof that this spreader adds two-dollars actual value to every load it carries—compared with the pitchfork way.

AS TO REPAIRS.

Repair parts—though rarely needed—will be quickly supplied for any SUCCESS Spreader ever sold in Canada.

GOSSIP.

A MUNICIPAL FARM.

At first thought it might seem to be an impracticable undertaking for a city to run a farm. Nevertheless, it has been demonstrated in Kansas City that such an enterprise can be made profitable. Kansas City has been in the farming business for a year. The farm is operated by city prisoners, and the idea was adopted because of the fact that the municipal workhouse was not meeting expenses. The results of a year's farming have just been summed up by the Board of Public Welfare. Prisoners who have been costing the city \$220 a year at the workhouse, have been earning an average profit of \$100 a year at the farm. In other words, the city in the last year has turned a loss of 60 cents a day on every prisoner into a gain of 30 cents. What is more important, the farm as a reformatory influence is showing vastly better results than the workhouse ever showed.

The municipal farm is conducted on the same order as any other farm. It has been observed that practically all the prisoners take an interest in the work. There is seldom an effort to escape. The guards are few in number. Farm work is not so monotonous as breaking rock, and the human derelict takes more kindly to it. The city is growing fruit and corn and garden truck, and there is variety of employment. Incidental to the raising of agricultural products, there is live stock to be taken care of, there are teams to be driven, roads to be built, fences and buildings to be repaired—in fact, it is not a hard matter to find some sort of labor which is adapted to the individual prisoner. The city sells the products of the farm, and also makes use of a considerable portion in feeding the "hands." The early apple crop has just been harvested, and the city has forty barrels of vinegar for sale. It is a back-to-the-soil movement that is bringing the returns. When it is considered that the municipal farm has been operated only about one year, the results seem little short of marvellous.—Louisville Courier-Journal.

THE TORONTO EXHIBITION.

That the Canadian National Exhibition is still in a very real sense the thing that it grew from, a Country Fair, is shown by the extent and beauty of its live-stock exhibits. The management has deemed it advisable to make every inducement in the way of accommodation available to the breeder of cattle, sheep and hogs. Originally, it was supposed that this section of the magnificent institution would appeal only to farmers, but it has been found that the city man is the most enthusiastic visitor to the stalls of the eatable animals. Perhaps it is because he likes to see on the hoof the finest specimens of the beast whose flesh he has partaken of at breakfast or luncheon; perhaps it is his memory of the old days on the farm, or of the conditions under which he spent his holidays when a kid that moves him. At any rate, it is an incontestable fact that the live-stock exhibits, which are unequalled by any annual exhibition on the continent of America, are a great contributory cause of its prosperity.

The prizewinners in the agricultural section of the Canadian National Exhibition will receive a certificate of their victory, which will identify it for all time to come. Formerly, the medals did not specify for which particular class they were given. The new medals this year will contain the name of the class and section, the name of the winning exhibit, and the name of the owner of the winning exhibit. This information will be engraved on each medal.

The prizes this year will be unusually elaborate, including a gold medal for the best horses, and one for cattle.

Exhibitors in the live-stock section of the Canadian National Exhibition will be interested to know that the barns have been renovated, and that the horse stables have been floored with blue clay. The straw barns have been distributed to more convenient locations. The new poultry building, which will be of the most modern description, will be ready for this year's exhibition.

Another feature of this year's exhibition will be a daily parade of live-stock after they are judged.

MESSRS. HICKMAN & SCRUBY

Court Lodge, Egerton, Kent, England.

Exporters of pedigree live stock of every description. Draft horses a specialty. During the summer months we shall export large numbers of cattle and sheep for breeding and show purposes. We attend all the leading fairs and sales, and can buy cheaper and ship cheaper than can anyone not living on this side. Correspondence invited.

SHORTHORNS, COTSWOLDS, BERKSHIRES

50 Shorthorns on hand, including 1 yearling bull, 3 bull calves, 12 heifer calves from imp. and home-bred cows, 7 yearling heifers, 7 two-year-old heifers, and the balance cows, from 3 years up. No Berkshires to offer. In Cotswolds, about 24 lambs for fall trade. CHAS. E. BONNYCASTLE, Station and P. O., CAMPBELLFORD, ONT.

PLEASANT VALLEY SHORTHORNS

For sale: 1 red, 1 roan, 2-year-old show bulls. Several good bull calves, also some yearling heifers. Some show propositions among them. If interested, write or call and see us before buying.

GEO. AMOS & SONS, MOFFAT, ONTARIO. Farm 11 miles east City of Guelph on C. P. R. 1/2-mile from farm.

GEORGE D. FLETCHER, BINKHAM P. O., ONT.

Offers a few choice Shorthorn Cows at bargain prices, bred to stock bull, Benachie (imp.) = 69954—, also Shorthorn heifer calves. Three Clydesdale fillies 1 and 2 years old; and Yorkshire sows ready to breed. Erin Shipping Station, C. P. R.

OAK LANE FARM

Clydesdales, Shorthorns and Cotswolds

Young stock for sale—most fashionably bred.

GOODFELLOW BROS., MACVILLE P. O., ONT. Bolton Station, C. P. R.; Caledon East, G. T. R. Local and Long-distance telephone.

CLOVER DELL SHORTHORNS

Always have for sale, young stock of both sexes. Milking strains a specialty. Moderate prices.

L. A. Wakely, Bolton, Ont. Bolton Junction, on C. P. R., within half mile of farm.

Shorthorns, Clydesdales and Oxford Down Sheep. Scotch Shorthorns: Several red bulls 10 months of age, by Protector, imp.; some with imp. dams; heifers 2 and 3 years of age. Clydesdale mares and fillies. Lincoln and Oxford sheep. All at reasonable prices. Phone connection. McFarlane & Ford, Dutton, Ont.

JOHN GARDHOUSE & SONS

Always have for sale a number of first-class Shorthorns, Shires and Lincolns, of both sexes. Drop us a line, or better, come and see for yourself. Weston Sta., G. T. R. & C. P. R. Long-distance phone in house.

HIGHFIELD P. O., ONTARIO.

Shorthorns and Oxford Down Sheep

Young bulls and heifers of richest Scotch breeding and highest quality. Twelve ewe lambs, two aged rams and two ram lambs. None better. Phone connection. Duncan Brown, Iona P. O., Ont.

The contributor writes: "The enclosed are original, and have never been published."

The editor answered: "I can quite believe it."

275 BURLINGTON SHORTHORNS 275

3 Choice Imported Scotch Shorthorn Bulls—yearlings.
1 Imported 2-year-old Bull, red—an extra sire.
10 Bulls, 9 to 16 months old—all by imported sire.
30 Choice Young Cows and Heifers—mostly bred or have Calves at foot. Long-distance telephone. Farm 1/2 mile from Burlington Jct. Sta., G. T. R. J. F. MITCHELL, Burlington, Ont.

SCOTCH SHORTHORNS—Eight extra good young bulls, from 10 to 15 months old; 20 choice cows and heifers, forward in calf or with calves at foot. Prices reasonable. Inspection invited.

Farms close to Burlington Jct., G. T. R.

W. G. PETTIT & SONS, Freeman, Ont.

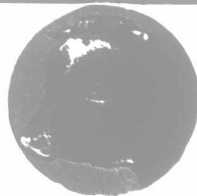
INVERNESS SHORTHORNS

I can supply Shorthorns of all ages, with richest Scotch breeding and high-class individuality.

W. H. EASTERBROOK, Freeman, Ont.

Imp. Scotch Shorthorns—When looking for Shorthorns, be sure to look me up. Young bulls fit for service, and females all ages; bred in the purple, and right good ones. A. C. Pettit, Freeman, Ont.

Maple Leaf Shires, Shorthorns, Hampshire Hogs
1- and 2-yr. old Shire stallions, females from yearling fillies up; Shorthorns, both bulls and heifers; a choice lot of young Hampshire pigs, both sexes, beautifully belted.
PORTER BROS., APPLEBY P. O., BURLINGTON STA. Phone.



Shorthorns (Scotch)

Cows imported and home-bred, either in calf or with calf at foot. Royally bred and right quality. Catalogue.

John Clancy, Manager. H. CARGILL & SON, Cargill, Ont.

The Show Time for All Live Stock and the Breeding Time for Sheep is Coming

I can furnish young Shorthorn bulls, females all ages, and Shropshire and Cotswold sheep that will be a credit to you in the show-ring, and will breed well for you also. I also have some beautiful children's ponies. Write and say what you want. Robert Miller, Stouffville, Ontario.

CHOICE SCOTCH BULLS FOR SALE, HERD-HEADING QUALITY.

H. SMITH R. R. 3, Hay, Huron Co., Ont. Farm adjoins Exeter, on G. T. R.

Cruickshank Nonpareils

BY PRIVATE SALE. Have still 6 head left. 2 fine yearling bulls, 1 two-year-old bull and 3 heifers—two of which are yearlings and 1 two-year-old. All in prime condition, and choice animals. The best and most richly-bred lot for sale to-day in Canada. W. D. ROBERTSON, OAKVILLE, ONTARIO.

HIGH-CLASS SHORTHORNS

I have on hand young bulls and heifers of high-class show type, pure Scotch and Scotch-topped, sired by that sire of champions, Mildred's Royal. If you want a show bull or heifer, write me. GEO. GIER, Grand Valley P. O. and station, also Waldemar station.

Spring Valley SHORTHORNS

We have for sale Newton Ringleader (imp.) = 73783—, a good bull, with first-class breeding. Also a Canadian-bred 15-month-old bull of the choicest quality. Phone connection. Kyle Bros., Ayr, Ont.

SALEM SHORTHORNS

I have generally what you want in choice Shorthorns. Flora Station, G. T. R. and C. P. R. J. A. WATT, SALEM.

SHORTHORNS AND LEICESTERS—Present offering: Eight choicely bred one and two year old heifers, also bull calves. Choice shearing rams and ram and ewe lambs. Show material. Write: W. A. Douglas, Tuscarora, Ont. Caledonia Station.

A HIGH-CLASS YOUNG Shorthorn Cow FOR SALE, sired by imp. Ben Lomond; also a heifer calf of good quality. Prices reasonable. Stewart M. Graham, Port Perry, Ontario.

SUNNY SLOPE SHORTHORNS

I bred Scotch Shorthorns exclusively. I have some choice young females—sire in calf and some good young bulls for sale at present at prices you can pay. Long-distance phone. A. EDWARD MEYER, BOX 378, GUELPH, ONT.

AUGUST 18, 1910

QUESTIONS AND ANSWERS.
Miscellaneous.

PLANTS FOR IDENTIFICATION.

Kindly tell me the names of the plants submitted. H. A. B. Frontenac Co., Ont.

Ans.—The plant with leaves in a bunch at the surface of the ground, having a considerable stem, and yellow flowers, is a hawkweed. Wish you would send in three or four more of them, that we might determine just which one it is. The other small, bushy plant, is the silver potentilla.

RIGHT TO A HORSE.

I gave my son a colt seven years ago; he paid for service only. I have kept same horse at my own expense for a little light work. Now, in my busy time, has his wife any legal right to come and take horse from my pasture and keep it away without my permission. Please state have I any claim on said horse, as he has never paid for its keep for seven years. SUBSCRIBER.

Ans.—We think that your son, as the owner of the horse in question, is entitled to do with him as he pleases; you might have a claim against him for pasturage and care of the horse during the time you have kept him, against which would, of course, be set off the value of the horse's services during that time.

BLUE OINTMENT ON TURKEYS.

When about ten days old, I put a small portion of blue ointment on turkeys to prevent them getting lice. Within a day my flock was reduced from 14 to 6. Would the ointment cause their death? A RECENT SUBSCRIBER.

Ans.—We are of the opinion that there was too much of the ointment used. It is a poison, and a portion of the size of an ordinary pea is sufficient for a hen, and doubtless the quantity used was too much for the turkeys. Poisons will act on the systems of chickens when applied externally, and evidently you poisoned your turkeys by an over-application of this ointment. Any louse powder would be the best thing to use for lice on turkeys and thus avoid an over-application of ointment. W. R. G.

INVERSION OF OVIDUCT.

I have several hens that have something the matter; the intestines seem to protrude and bleed, and they pick at it; they have oats, bran and plenty of milk to eat. Could you tell me what to do? They are in a closed-in run. F. R. Nipissing Co., Ont.

Ans.—From the description given, we would say that the hens are suffering from inversion of the oviduct. This trouble seems to be more prevalent in the Mediterranean breeds than in the American breeds. There is no cure for it. As a rule, it is more common where hens are forced for egg-production than in the ordinary flock. We cannot suggest any remedy outside of changing the feed and feeding a ration which is not so highly nutritive as you have been giving. M. C. H.

THIN HORSE.

I have a mare six years old in fairly good spirits, but in poor condition. Her teeth were bad, but have had them attended to. Am anxious to have her in good condition. She works on a farm.

1. What would you advise me to feed to build her up?
2. Is it advisable to feed oats that have a little barley in them?
A BEGINNER.

Leeds Co., Ont.

Ans.—1. Take 6 ounces each, sulphate of iron, gentian, nux vomica, ginger and bicarbonate of soda; mix and make into 48 powders. Give her a purgative of 8 drams aloes and 2 drams ginger. Feed bran only until purgation commences. After the bowels regain their normal condition, give a powder every night and morning. Feed moderate amounts of hay.

2. Yes.

Judge—You are privileged to challenge any member of the jury now being impanelled.

"Well, then, yer honor, Oi'll fight the small man wid wan eye, in the corner there, ferrest yez."



The CAPITAL Is the Cream Separator that will "Buy Itself" For You.

As soon as you have read this advertisement, sit down and write a post card for The Capital book—the book that not only tells the story of the easy-running, cream-saving separator, but that tells how you can put The Capital in your own dairy practically without costing you a cent.

The book also tells all about the wonderful Capital gears, about their perfect meshing and non-wearing qualities—how they run in oil—how an automatic clutch stops them running the minute you let go of the handle—and about how they give the light, three-and-a-half-pound bowl 7,000 revolutions a minute.


It tells how and why The Capital skims closer—why The Capital wastes less than one-fifth the cream that other separators waste—and then explains how the machine can be made sweet and clean in two minutes after you are through using it.

This book is full of hard-and-fast facts—separator facts—which every dairyman owes it to himself to know; facts which will prove a revelation to the dairyman who is not familiar with The Capital.

Write for the book to-day—NOW.

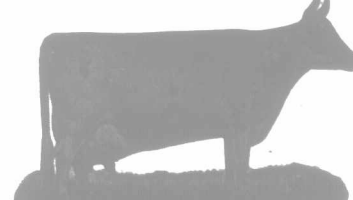
THE NATIONAL MFG. CO., LIMITED.
Head Office: Ottawa. Factories: Ottawa and Brockville.
Branch Offices:—Regina, Sask.; Edmonton, Alta.; Moncton, N.B.

GLENGOW Maple Grange Shorthorns



Have two excellent bulls left yet, both about ten months old, and good enough for any herd; also a number of choice heifers, all ages. For particulars write to:
Wm. Smith, Columbus, Ont.

BURNSIDE AYRSHIRES!



Fresh importation just landed in quarantine of 60 head. I have the choicest lot of 12 young bulls I have ever imported. From the best herds in Scotland, such as Auchencrain, Osborne, Netherhall, Bargnoch, Barr of Hobsland, Mitchell of Lochfergus. All fit for service. A number of cows, 3-year-olds, 2-year-olds, and 20 choice yearling heifers. All are for sale.
R. R. Ness, Howick, Que.

Stonehouse Ayrshires



36 head to select from. All imported or out of imported sire and dam. For sale: females of all ages. Am now booking orders for bull calves.
Hector Gordon, Howick, Quebec.

Ayrshires and Yorkshires!


We still have a few choice individuals of almost any age on hand in Ayrshires, and are always ready to price any. Other breeders in this section. Bull calves from Record of Performance cows. A few young Yorkshires on hand.
ALEX. HUME & CO., MENIE, ONT.

Ayrshires



Bull calves, from 4 months to 9 months, from imported sire and Record of Performance dams. Records 50 to 63 pounds per day.
N. Dymont, Clappison's Corners, Ont.

ISALEIGH GRANGE AYRSHIRES!




Our herd were all selected on their ability to produce a heavy yield of milk. We have a number of 40, 45 and 50 lb. cows, imported and Canadian-bred. From them are young bulls and heifers for sale. None better. JAMES BODEN, DANVILLE, QUEBEC ISALEIGH GRANGE FARM.

CRAIGALEA AYRSHIRES

have won more money the last four years than all competitors combined. They are heavy producers and high testers; records of production given. Stock of both sexes for sale of show-ring form.
H. C. HAMIL, BOX GROVE P. O., ONT. Markham, G. T. R.; Locust Hill, C. P. R. Bell phone connection from Markham.

Lakeview Holsteins




Count Hengerveld Fayne De Kol, who heads this herd, together with several of his get, will be at the Canadian National Exhibition. Come and see them. There are some very choice young bulls among them. No young stock priced till exhibition time.
E. F. OSLER, BRONTE, ONT.

World's Champion-Bred Bull



Grace Fayne 2nd Sir Colantha. His dam, sire's dam and two sisters average 31.80 lbs. butter in 7 days. For further particulars send for catalogue. Address M. L. HALEY or M. H. HALEY, Springford, Ontario.

High-class Holsteins and Tamworths.



I am now offering a number of two and three year old heifers, with official records from 11 to 20 pounds butter in 7 days; also bull calves with rich backing. Tamworth boars from 6 weeks to 1 year old—imp. sire and dam. A. C. HALLMAN, BRESLAU, ONT.

Elmwood Holsteins

Choicely-bred calves for April and May delivery. Sired by imported Ykema Sir Posch and Pontiac Sarcastic, a grandson of Sarcastic Lad. Registered. Delivered. Express paid. Safe delivery guaranteed.
E. D. GEORGE & SONS, PUTNAM, ONT.

Holstein Bull

Special offering: Bull calf, dropped Jan. 11th, 1910. Individually and breeding one of the best ever produced at Maple Grove. Three world's records close to him in his pedigree. If you want that kind write:
H. BOLLERT CASSEL, ONT.

A High Percentage

The combined percentage of Protein and Fat in
BRANTFORD GLUTEN FEED
is 25%
There is no better feed for milking cows. Present price, \$24.00 per ton.
The Brantford Starch Works
BRANTFORD, LIMITED ONTARIO.

Holstein - Friesians


FAIRVIEW FARM offers young bulls, sired by Pontiac Korndyke and Rag Apple Korndyke, without question the two greatest Korndyke bulls in the world, and out of cows with large A. R. O. records and testing 4% fat. Come and see them or write.
E. H. DOLLAR, Hevelton, N. Y. Near Prescott.

Centre and Hill View Holsteins



We have added to head our herd a young bull from King Segis, world-record sire, and a 26-lb 4-year-old dam. Have 2 bulls born in January from Bonheur Statesman. Their grand-dams have over 21 lbs. butter in 7 days. Also younger ones from good A. R. O. dams. These will be sold right, considering their backing.
P. D. Ede, Oxford Centre, Woodstock Stn. LONG-DISTANCE TELEPHONE.

WOODBINE FARM HOLSTEINS



Offers a number of fine bulls and bull calves, sired by Sir Creamelle, who is a direct descendant in two different lines of the great cow, Duchesa Ormsby, 24.44 lbs. butter in 7 days, dam of five daughters with records that average 20 lbs. of butter in 7 days, the greatest producing family of the breed. Write for prices. Telephone connection. Shipping stations: Ayr, C. P. R.; Paris, G. T. R.
A. KENNEDY, AYR, ONTARIO.

MAPLE HILL HOLSTEIN - FRIESIANS SPECIAL OFFERING:

Four-year-old cow, fresh last October; bred April 23rd to Choicest Canary, whose dam is the highest seven- and thirty-day record cow in Canada.
G. W. CLEMONS, St. George, Ont. Bell phone

Glenwood Stock Farm—Holsteins and Yorkshires.

Holsteins all sold out. Have a few young Yorkshire sows, about 2 months old, for sale cheap. True to type and first-class. Bred from imported stock.
Thos. B. Carlaw & Son, Warkworth P.O., Ont. Campbellford Station.

Ridgedale Holsteins

I have left three bull calves that will be priced right for quick sale; their dams are heavy producers, and their sire was bred right.
R. W. WALKER, Utica, Ont. Phone connection

**HAS USED DR. FOWLER'S
EXTRACT OF
WILD STRAWBERRY
For Over Seventeen Years
FOR DIARRHOEA, DYSENTERY,
SUMMER COMPLAINT, ETC.**

Mrs. Holliday, Box No. 86, Wroxeter, Ont., writes:—"I must say that we have used Dr. Fowler's Extract of Wild Strawberry for over seventeen years, and have found nothing to equal it for all Summer Complaints, Diarrhoea, Dysentery, etc. Our house is never without a bottle of the Extract and I can recommend it to be kept in every home, especially where there are children."

You run absolutely no risk when you buy Dr. Fowler's Extract of Wild Strawberry, as it has been a standard remedy on the market for over sixty-five years.

A few doses have often cured when doctors' prescriptions and other remedies have failed. Its effects are marvellous. It acts like a charm. Relief is almost instantaneous.

We wish to warn the public against being imposed on by unscrupulous dealers who substitute the so-called Strawberry Compounds for "Dr. Fowler's."

Ask for "Dr. Fowler's," and insist on getting it, as the cheap imitations may be dangerous to life.

The original is manufactured only by The T. Milburn Co., Limited, Toronto, Ont. Price 35c.

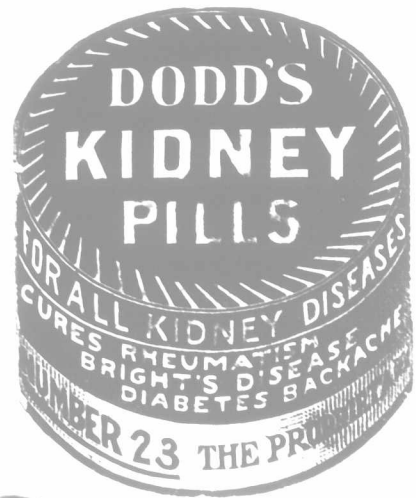
**BRAMPTON
Jerseys**

CANADA'S GREATEST JERSEY HERD
We are offering for sale one 2-year-old bull and four yearlings, fit for service; also six bull calves; females of all ages. Come and see them or write.
B. H. BULL & SON, BRAMPTON, ONT.

Charles Sumner, when in London, gave a ready reply. At a dinner given in his honor, he spoke of "the ashes" of some dead hero. "Ashes! What American English!" rudely broke in an Englishman; "dust, you mean, Mr. Sumner. We don't burn our dead in this country." "Yet," instantly replied Mr. Sumner, with a courteous smile, "your poet, Gray, tells us that 'Even in our ashes live their wonted fires.'" The American was not criticised again that evening.

ENOUGH TO MAKE HIM ANGRY!

One day a Scotch and English boy, who were fighting, were separated by their respective mothers with difficulty, the Scotch boy, though the smaller, being far the more pugnacious. "What garred ye fight a big laddie like that for?" said the mother, as she wiped the blood from his nose. "And I'll fight him again," said the boy, "if he says Scotsmen wear kilts because their feet are too big to get into trousers!"



**QUESTIONS AND ANSWERS.
Miscellaneous.**

RE WINTER APPLES.

Would you please let me know, through your paper, if the winter apples are plentiful for this year? C. C.

Halton Co., Ont.
Ans.—See issues of August 4th and August 11th, Garden and Orchard section.

SIRES FOR SERVICE.

Bought a pure-bred Yorkshire boar pig, and, on receiving him, find he has only one testicle in the scrotum. He is a good pig otherwise, and is four months old.

1. Is it likely that the other testicle is up in the body of animal?
2. Would he be a sure stock-getter?
3. Is it possible for him to transmit this imperfection to his progeny?
4. Are there several good reasons why he should not be kept for service? If so, what are they?
5. What would you advise me to do with him?
6. Have a fine, large, registered Shropshire ram, and as my flock is quite a small one, one of my neighbors wishes the services of this ram in his flock of grade ewes. What would be a fair service fee to charge him per head for high-grade ewes?
7. What would be a fair rental for pasture per head each month, for a small number of sheep?
8. What is an average cost per month during the winter and early spring seasons to feed sheep on clover hay and small quantity of oats? JERRY.

- Ans.—1. The other testicle is retained in the body.
2. Such animals, as a rule, are as sure stock-getters as those having both down.
 3. Yes; occasionally; but not generally.
 4. The only reason is that he may leave an odd one with the same defect.
 5. We would use him. If an odd one of his get were defective, it should be slaughtered while young, as castration cannot be completed, and at an older age the flesh would be ill-flavored.
 6. We should say fifty cents, if your neighbor grazes the flock, and 75 cents to one dollar if you keep them.
 7. About twenty-five cents.
 8. About fifty cents.

TRESPASS BY ANIMALS IN UN-ORGANIZED DISTRICT.

Would you kindly inform me, through your paper, how the law stands in regard to fencing stock in an unorganized township? Everybody here fences against their neighbors' stock; we do the same; my calves strayed on to a neighbor's lot and did some trifling damage; he claimed damages in excess of what was done, so I refused him bringing the cattle home. What I chiefly want to know is: Can he claim damages when he has not attempted to fence his lot? Surely one cannot be responsible for cattle straying on to unfenced property. F. A.

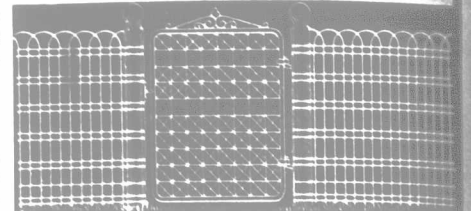
Ans.—The law is to be found in Sec. 94, of Ch. 109, of R. S. O., 1897, known as "The Unorganized Territory Act," and is as follows: "No damages shall be recovered in respect of injuries committed in any of the said Districts upon any land by horses, cattle, sheep or swine, straying upon such land, unless the animal so straying was running at large contrary to a municipal by-law in that behalf; and where no by-law prohibiting or regulating the running at large of the class of animals to which the animal trespassing belongs, is in force in the municipality, township or place, then no such damages shall be recovered unless such animal has broken through or jumped over a fence then being in reasonably good order and of the height of four and one-half feet, but this section shall not apply to breachy or unruly animals." An exception is made to above by Chap. 56, of the Statutes of 1909, which provides that the owner of a bull of over the age of ten months, shall be liable in damages for all injuries committed by such animal allowed to run at large, and shall in addition be liable to a penalty not exceeding Ten Dollars and costs, in the discretion of the convicting Justice or Magistrate.

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at less than the cost of cheap wood**

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is made of heavy No. 9 steel spring wire, so it can never sag. It is carefully galvanized and coated with white enamel paint. No investment you can make will add so much to the appearance of your property.



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THE BANWELL HOXIE WIRE FENCE CO., LTD., Dept. B, HAMILTON, ONT., WINNIPEG, MAN.

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I am offering some choice young Jersey bulls, sired by Brampton's Blucher, winner of first prize, Toronto and Winnipeg, and from choice, deep-milking cows with good teats. Also Chester White pigs, 3 to 4 months old, both sexes, at special prices.

CHAS. E. ROGERS, Dorchester, Ont.

WANTED!

Ten Jersey Heifer Calves, from 2 to 4 months old, eligible to register. Send description, with lowest cash price, to: High Grove Stock Farm, P. O. Box 111, Tweed Ont.

Oxford Down Sheep, Shorthorn Cattle, Yorkshire Hogs—Present offering: Lambs of either sex. For prices, etc., write to John Cousins & Sons, Harriston, Ont. Buena Vista Farm.

LEICESTER SHEEP

Willowdale Stock Farm, Lennoxville, Quebec.

Has Leicester sheep that cannot be beaten in Canada. Lambs of both sexes for sale. Exhibition stock. Lambs come in February and March. **J. H. M. Parker, Lennoxville, Que.**

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Alloway Lodge Stock Farm

A few fitted shearlings and lambs for sale, and some good strong breeding sheep of all ages. Long-distance 'phone.

ROBT. McEWEN, BYRON, ONTARIO

I am now offering a choice lot of yearling rams of my own breeding from imp. Minton ewes, also ram and ewe lambs of both breeds. A few rams and ewes fitted for showing.

John Miller, Brougham, Ontario
CLAREMONT STATION, C. P. R.

MAPLE VILLA OXFORD DOWNS and YORKSHIRES

Are ideal in type and quality. Present offering is a grand lot of ram lambs for flock headers, also a number of shearing ewes and ewe lambs, sired by imp. Hamptonian 22nd, Yorkshires of both sexes and all ages. Right good ones. Satisfaction assured. **J. A. CERSWELL, BOND HEAD P. O., ONT. Bradford or Beeton Station.**

FARNHAM OXFORD DOWNS

The Champion Flock. First Importation, 1881. Our present offering is a grand lot of ram lambs for flock headers, from our imported champion ram, and a number of them from imported ewes. Also a first-class imported yearling and a two-shear ram. Fifty superior yearling ewes, and a number of ewe lambs. We are also offering a few large Hampshire ram lambs from imp. sire and dam. Long-distance 'phone on the farm: Central, Guelph.

HENRY ARKELL & SON, ARKELL, ONTARIO.

LABELS

Metal Ear Labels for Cattle, Sheep and Hogs.

The old standby for all who have stock liable to stray, or to dispute as to identification or ownership; for herd or flock records, or for general convenience. Send for free circular and sample. It may save you much trouble. Write to-day.

F. G. JAMES, BOWMANVILLE, ONTARIO.

Fairview's Shropshire Offerings: Their breeding is of the very best, and for 26 years they have proved their superior quality in the leading show-rings, including three World's Fairs, where the Fairview exhibits won more section, flock, champion and special prizes than all competitors combined. That's the kind we now offer. For a flock header or a few ewes, write for circular and prices to: **J. & D. J. Campbell, Fairview Farm, Woodville, Ont.**

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Chatham, Ontario. **MAC CAMPBELL & SONS, Northwood, Ontario.**

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3-year-old show ram, 1st at London and Ottawa and 2nd at Toronto as a lamb. Shearing ewes. Prices right for quick sale. **Wm. Barnett & Sons, Living Springs, Ont.** Fergus station, G.T.R. and C.P.R.

PINE GROVE YORKSHIRES

At the late Guelph Winter Show we won more prizes than any two and Ottawa Winter Fat-stock Shows of 1908-09. Young pigs for sale, mated not akin, stock of superior excellence. **Joseph Featherston & Son, Streetsville, Ont.**

Newcastle Tamworths and Shorthorns

FOR SALE: Young sows due April and May, by imp. boar, dams by Colwill's Choice, Canada's Champion boar in 1901-2-3-5; also choice pigs, both sexes. Two yearling Shorthorn bulls, Syme and Lavender families, and six choice heifers and heifer calves. Prices right. Bell phone.

A. A. Colwill, Box 9, Newcastle, Ont.

Willowdale Berkshires!

Nothing to offer but suckers and three extra choice young sows, bred to farrow May and June. Be quick if you want one. **J. J. WILSON, Importer and Breeder, Milton P. O. and Station. C. P. R. and G. T. R.**

LARGE WHITE YORKSHIRES.

Have for sale at the present time a fine lot of young sows bred to imp. boar, due to farrow end of Aug. and Sept.; boars ready for service. A good lot of spring pigs. Pairs supplied not akin from large stock from the best British herds. Long-distance Bell 'phone. **C.P.R. & G.T.R.**

H. J. Davis, Woodstock, Ont.

Monkland Yorkshires With very nearly 100 sows in breeding, of modern type and high-class quality, our herd will stand comparison with any in Canada. We are always in a position to fill large or small orders with despatch. Long-distance 'phone. **JAMES WILSON & SONS, FERGUS, ONT.**

PINE GROVE BERKSHIRES!

Sows bred and ready to breed. Nice things, three and four months old.

W. W. BROWNIDGE, Milton, C. P. R., Ashgrove, Ont., Georgetown, G. T. R.

Hilton Stock Farm

Present offering: 6 yearling heifers and several younger ones. All very choice. Of Tamworths, pigs of all ages and both sexes; pairs, not akin. **R. O. MORROW & SON, Hilton, Ont.** Brighton Tel. & Stn.

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Are ideal in type and quality. We have young things of both sexes for sale. Also one ton Clyde mare; one grand Shorthorn bull. Long-distance Bell Phone G. T. R. and C. P. R.

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MORRISTON TAMWORTHS

A grand lot of hogs from 2 to 10 mos., also young sows (dandies). Some just bred. Some in farrow to first-class boars from best herd in England. Prices right. **Chas. Currie, Morrilton, Ont.**

When Writing Mention This Paper.

CORN HARVESTED 100% RIGHT AT 50% SAVING OF LABOR AND TIME

ADD 40 per cent feeding value to your corn crop by correct harvesting. You would not think of letting your ears spoil on the stalks for lack of prompt attention, yet thousands of farmers are wasting a large part of the value of their entire crop every year simply because they neglect to harvest the stalks when they are ripe. Corn stalks properly harvested and shredded are almost equal to timothy hay for feeding. When allowed to remain in the field too long a large part of this feed value is lost. Many farmers do not realize this. Many are too busy with husking and other fall work or are too short of help to give the stalks proper attention.

An I H C Corn Binder

will solve this problem. It will add 40 per cent to the value of your crop and save you half the labor of harvesting as well. As soon as the ears begin to glaze you can jump right in with your I H C Corn Binder (one man and a team is all it takes) and drive right along cutting and binding the stalks into bundles and delivering them in piles ready for shocking—all in one operation. Think what a saving of labor this means in addition to the value added to your crop. You can take your pick of four famous machines, a Deering, McCormick, Milwaukee, or Osborne. Any one of them will do your work and give entire satisfaction. Then you will want to do your husking and shredding in the same quick, cheap, and satisfactory way.

An I H C Husker and Shredder

—a Deering, McCormick, or Plano machine—will again save you time and money, for it will not only add immensely to the value of your crop by handling it the best and quickest way, but will save you a large item in the cost and bother of getting help. Every farmer knows that last year's sudden cold and snow and the impossibility of getting help to husk the corn caused great damage to the corn crop of 1909—both ears and stalks. I H C Corn Binders and I H C Huskers and Shredders will guarantee you against such a loss. They will take care of your entire crop easily and quickly—with 100 per cent of efficiency and a 50 per cent saving of time and labor. See to it that you have these machines in time to take care of this year's crop. See the local I H C dealer right away. He will gladly show these machines and furnish you with catalogue and full details and prices. Or, write International Harvester Company of America at nearest branch house.

CANADIAN BRANCHES—International Harvester Company of America at Brandon, Calgary, Edmonton, Hamilton, London, Montreal, Ottawa, Regina, Saskatoon, St. John, Winnipeg, Yorkton.

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MENTION THE FARMER'S ADVOCATE WHEN WRITING ADVERTISERS.

GOSSIP.

Crash! Down the kitchen stairs fell the entire trayful of crockery from the dining-room. Not even the saltcellar remained unbroken. Within the dining-room sat husband and wife, staring blankly at each other. What did it all mean? But this was a time for action, and the mistress rushed to the door. "Jane, Jane!" she cried, "whatever have you done?" Jane smiled. "Oh, mum," she replied, "it's only the dinner things, mum. What a good thing I hadn't washed 'em up!"

PRIZE LISTS FOR THE OTTAWA FAIR.

The prize lists for the Central Canada Exhibition, which will be held from September 9 to 17, have been issued, and copies may be procured from Secretary E. McMahon, Ottawa. An examination of the many columns of premiums offered, convinces one that the coming Fair will be one of superior merit. Additions have been made to the cash awards, and wherever a new class was needed to meet the wishes of exhibitors, it was inserted. Several \$50 prizes are allotted in the horse department, and in some cases there is a fifth prize. Considerable increases have been made in the prizes for French-Canadian horses. The cattle department is dealt with in the same liberal manner. The fame of Ottawa's Poultry Show is well recognized in the premium list for the coming event. Prizewinners are informed also that gold medals may be exchanged for \$20 in cash in all cases where exhibitors prefer the money. Entries close on September 7.

There is a total of some \$17,000 to be distributed among prizewinners. Live-stock owners owe it to themselves to secure a copy of the premium list and select the departments in which they can compete. Apart from the cash won, there is a distinct advantage in presenting stock and produce to the public at so great a show as the Ottawa Exhibition.

THE CROP THAT PAYS.

No farmer can make the broad statement that one crop pays better than another. The amount of the return depends largely upon the character of the land on which the crop is grown. One kind of land brings the greatest return from a certain crop; another piece of land of different quality would perhaps yield a very small return if sowed to the same crop. Finding out the particular class of crops the land is best suited to growing is, therefore, a very important matter for the wide-awake farmer.

A splendid example of what can be gained by the intelligent adaptation of crops to soil conditions is to be found in the County of Norfolk, Ontario. In certain parts of that county there are considerable areas of sandy land that cannot hope to compete with heavier, richer soils in the growing of wheat and other staple grains. Thus, farmers who attempted to grow these crops, found that their profits were not as satisfactory as might have been desired. Some years ago, however, a few men noted that the soil and climate of the county were well suited to growing fruit, especially apples. The Norfolk Fruit-growers' Association was formed, and forthwith started on a reputation-making campaign. All members agree to care for and spray their orchards as stipulated by the rules of the Association. Incidentally, too, all fruit was to be marketed through the central agency. The results have been little short of phenomenal. The orchard acreage has been largely increased, Norfolk apples are now held as second to none in the markets of the world, and the profits have been most gratifying. As a consequence, land values, in the last six years, have doubled.

And this has been accomplished mainly by selecting the crop best adapted to the soil. The work that the Commission of Conservation has undertaken, of classifying lands according to the character of the soil, to determine what crops can most profitably be grown, is therefore a task of no small importance. If the Commission points out the crops that pay the best on different soils, both the farmer and the nation will be the richer for it. Commission of Conservation, Proceedings, Bulletin No. 3.

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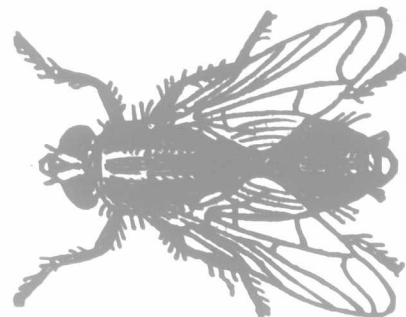
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Also Piles, Burns, Scalds, Chapped Hands and Face.

Gentlemen use it after shaving. This Balm is handled by the best firms, and is highly recommended by those who have used it.

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WHILE "Northern Electric" telephones are as near perfection as brains backed by years of experience can make them, even yet are we trying to still further improve our instruments. Our newly designed No. 1317 Telephone Set—absolutely the most modern farm 'phone in the whole telephone world—represents years of study, an expenditure of \$10,000 in cash, and months of patient experiment and test before we have allowed it to go on the market.

We now pronounce it perfect—now, firmly convinced that it is all we have tried to make it, we offer it to you.

Examine it for yourself—or if you are not sufficiently well posted on such matters, get your own electrical expert to give our No. 1317 the severest tests of which he knows.

Take it up point by point. There is the transmitter, for instance, the same, standard long-distance type that is used on all standard long-distance 'phones. The general manager of the biggest telephone company in the world could have no better on the private 'phone he uses on his own desk. There is no better made. And not only is ours the best transmitter but it is also the cheapest in point of maintenance; it requires less battery cur-

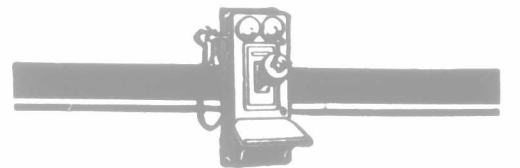
rent than any transmitter on the market—as little as 1-7 of some of the others.

Then the receiver on No. 1317 is worthy of attention. Here the magnets demand consideration; made from a special grade of steel, they are permanent—retain their full strength indefinitely. And the bell pieces are made of special annealed Norway iron. This receiver is so constructed that dust cannot accumulate on the back of the diaphragm nor can local noises disturb the listener and spoil transmission. Each part of the receiver on No. 1317 is the result of long and careful study—throughout, it is the best combination possible.

Or look at the switch-hook—note how compact and self-contained it is,—how all contact springs are vertically mounted as to afford no resting place for dust and other accumulations.

Our standard self-contained switch-hook is equipped with platinum points—you can understand the efficiency for which that makes.

And so it goes—through our No. 1317 every part is the best, and most perfect it is possible to devise. Never before has it been possible for any manufacturer—no, not even for us—to offer such an instrument to the Canadian farmer.



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THIS book, Bulletin No. 1216 we call it, (and that's what you ask for), not only tells you all about our instruments, but also tells you all you need to know—every detail—about the steps necessary to take in the organization of a rural telephone company. It describes the simple procedure—goes into it minutely—tells about the very small amount of capital necessary, explains how to interest your neighbors and informs you how your own community can have just as efficient a telephone service as the largest city on the continent. Write for it,—learn why a telephone on your farm will actually save instead of costing you money. Send today.

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