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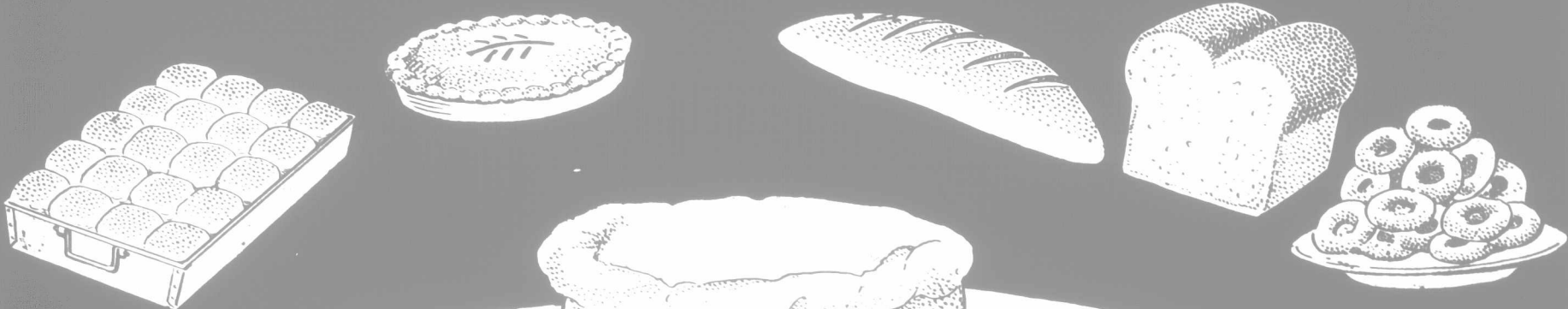
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Vol. XLV.

LONDON, ONTARIO, AUGUST 11, 1910.

No 933

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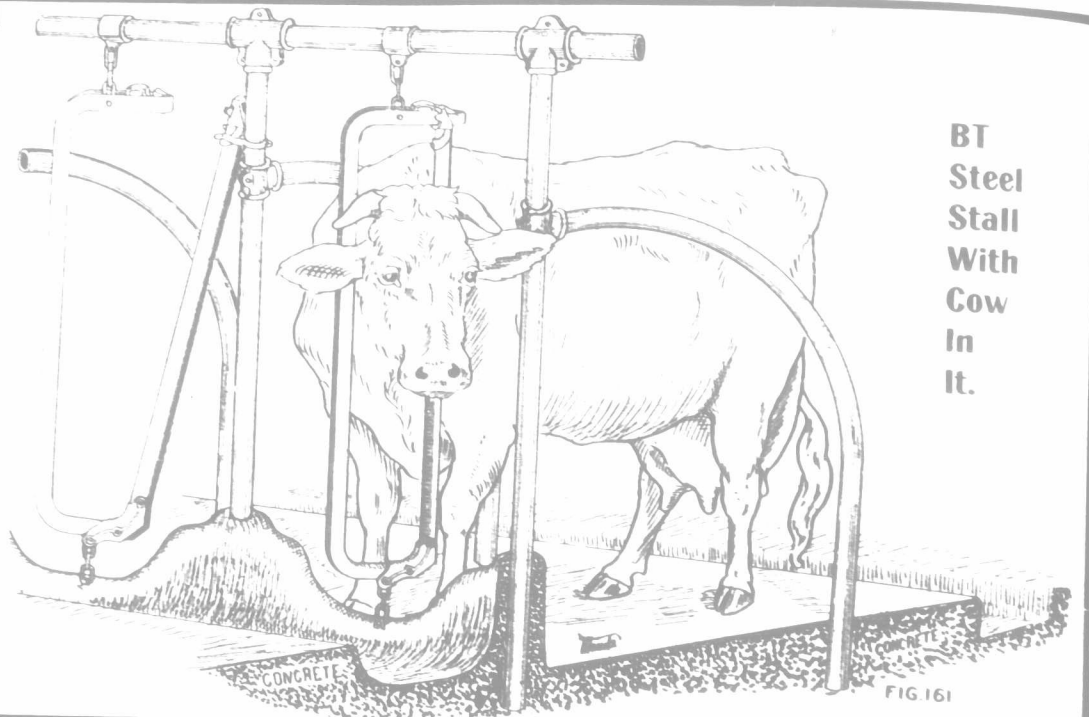
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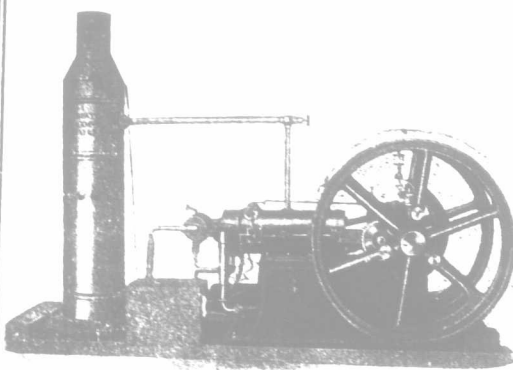
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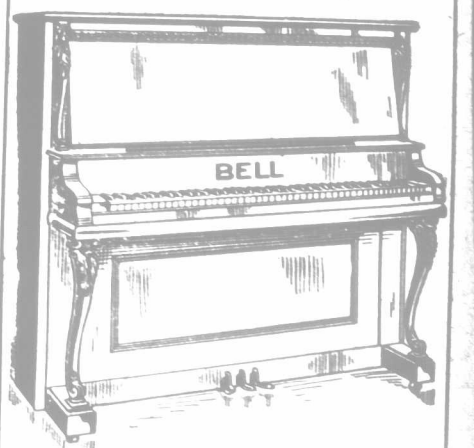
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Vol. XLV.

LONDON, ONTARIO, AUGUST 11, 1910

No. 933

EDITORIAL.

Happiness is the by-product of an unselfish life.

The farm is a first-class place to work and live—none better—if you make it so. It may be made otherwise, and often is. From a dull, dead-spirited, unprogressive agriculture, deliver us! No wonder the boys leave it.

Just as the railroads are of indispensable value in serving as a rapid, easy means of communication from one center to another, so are the public roads leading from the producing sections to these centers. The demand for good country roads is not a cry for a class favor; good roads will benefit the tradesmen and the consumers of every degree and condition in all towns simultaneously as they benefit farmers. They are a national need, and will produce national good. After the construction of the railroads, good public highways stand high as factors in national development.

Some of our correspondents approach the Flavelle-Duff letter rather gingerly, as though the discussion were hedged about with extraordinary restrictions. The fact is, the conditions laid down by us to rule this argument are only such reasonable ones as should be observed in any respectable journal. While agreeing with much that Mr. Flavelle has written, we have recognized that there is considerable to be said on the other side. Some of it we said ourselves. Some of it our correspondents have treated. On the whole, we are pleased with the spirit manifested by practically all who have yet taken a hand.

The evasion by the few discommodates the many. If the order providing for the muzzling of dogs throughout the quarantine area in Western Ontario were conformed to by every dog-owner, the malady would have by this time, in all probability, been eradicated. But, because a few attempt to evade the law, the trouble is likely to continue for a considerable time. The story is ever the same. One man is too indifferent to combat his weeds, and so the entire community becomes polluted. One man fails to scald his milk cans or to cool his milk, and the whole factory suffers in a deteriorated cheese product. One man keeps too many cur dogs, so no man in the community can keep sheep. Verily am I my brother's keeper.

When a wide-awake contractor or manufacturer figures on a job, as to whether he can afford to take it, or not, he estimates every item carefully, from material, interest and risk, to labor, adding on top of all this a margin to represent his expected profit. This margin is supposed to be ample to include the value of his own services as manager, if he has not already itemized this factor separately. Under this plan, unless he has erred badly in his calculations, or encounters some extraordinary mishap, you don't find him working for nothing. When every department of farm work is handled on that exact business principle, the labor applied to our fields and stables will be better repaid than it is. Unprofitable departments will be made profitable or cut out; time will be economized, and the whole occupation placed upon a more paying basis. We realize well enough the difficulty of reducing farm management to any such basis, but, perceiving the need, we realize quite as strongly the need of making the attempt.

"There is no calling under the sun so imposed upon, or so much at the mercy of unscrupulous money-grabbers and politicians as that of agriculture," remarks a Nova Scotia correspondent. If he is not right, we fail to call to mind the exceptions.

If seven hundred and thirty farmers find it profitable to record the produce of their cows individually, enabling them to eradicate, with judgment, the unprofitable members of the herd, why will it not pay you? The most skilled men are freest to admit the impossibility of accurately telling from the look of a cow how much or how rich milk she will give. Do you know how much milk each of your cows gives? Do you know how much fat each produces? Do you know what it costs to feed each? If not, step into the ranks of progressive dairymen; get scales, arrange for the Government tests, and find out these things which you should know.

We have many industries at the present time which are more important than sheep and wool production. Time was when this was not so; time will be when sheep will again take a foremost rank in our live-stock productions. Wool is an essential for our people in all stations of life, and, as population multiplies, the demand will create anew the industry, if not in the old hands, then in places where sheep have not been known before. This is one of our industries which demands encouragement—not artificial forcing, but good basic, sound, lasting encouragement. J. P. Murray, of Toronto, makes some suggestions along such lines which are worth thinking over.

A large percentage of cheese factories entirely disregard the test in their management. The milk is pooled, and each patron is paid in proportion to the number of pounds of milk delivered, regardless of its quality. Such a system puts a premium upon low-testing milk, tends to prevent the improvement of herds, and ultimately must produce a cheese of lower quality, due to a deficiency of fat in its make-up. In cheese production, not only is a large flow of milk desirable, but also a good percentage of butter-fat. If our cheese factories generally established payment upon the butter-fat basis (or butter-fat, plus two per cent.), there would be a marked increase in the quality of the cheese output, a decrease in the number of pounds of milk required to make a pound of cheese, a juster distribution of returns, and a new era in the improvement of dairy herds and herd management.

Patronize the lightning-rod agent if you wish to pay two or three prices for a job you can do yourself. But, by following directions given from ten to twenty times in "The Farmer's Advocate," and briefly repeated on page 1208 of our issue of July 28th, you can, at a total cost for material and labor not exceeding five cents a foot, make and erect as good lightning-rods as any you can buy. Nine strands of No. 9 galvanized fence wire, or about double the number of strands of the better-galvanized but smaller telephone wire, will make as good rods as any you can buy, and better ones than quite a few that are sold by agents for anywhere from six to twenty cents a foot. Do not believe agents who would have you believe that copper wire is necessary. The twisted cables of galvanized-iron wire are, if anything, preferable to the single, smaller copper cable, so long as they last, and they should last quite a long time, particularly if the telephone wire is used. We have gone into this subject, and speak with knowledge and conviction.

The Search of the Education Commission.

The Royal Commission on Technical Education for Canada appropriately began its enquiry under favorable auspices in Nova Scotia, where educational institutions for the promotion of skilled industry and agriculture are making rapid and substantial strides. The men of the Maritime Provinces have always been in the van of intellectual progress, and their place will be secure in the annals of the Dominion. But educational ideas and methods must be readjusted to meet changing needs and conditions. The educational foresight of Nova Scotia was quick to take in the situation. To be by the sea and on the world's highways of commerce was an immense natural vantage, and the agricultural and industrial opportunities are unsurpassed. Perceiving at hand the beginning of the ebb of the Western and American booms, and a revival of faith in the solid security of Eastern Canada, leading men began to lay deep their plans for the future in education, a more secure foundation for the people than speculating in Western land or gambling in stocks. In part, the cue was taken from Germany, and to-day Nova Scotia is a leader in schools for training the eye, the hand and the brain of workers. If the competition of progressive industries in other countries compels the employment of more systematically-educated artisans in Canada, in relation to the operations of the farm there is a corresponding situation, the needs of which are even more urgent. Foreign governments and agricultural leaders of the brightest calibre are everywhere bending all their energies and devoting resources without stint to push various branches of the industry to the front. The go-as-you-please methods of the past will not answer now. We cannot longer sponge upon nature or trust to luck. It is recognized by thinking farmers very generally that farming is a complicated business, requiring scientific knowledge, good judgment, business skill and manual dexterity rather than mere muscle. It is an acknowledged fact that the public-school system of the country has failed in cognizance of these important considerations, and the farm is paying the penalty. The little white schoolhouse on the line is not what it ought to be, and it is not doing what it might for the furtherance of agriculture or the interests of the farm home. Infinitely more than upon the factories of the town the future security and well-being of Canada is in its soil and the men and women of the soil. The Commission, we submit, have no more important duty than to enquire what the school systems of Quebec, Ontario and Provinces westward are doing to relate themselves to agriculture and its interests. To what extent, if any, are the text-books, normal training, curricula and inspection co-ordinated with the farm and farm home for their betterment and progress, and what are the essential items in the programme of reform for which the occasion calls? Time is passing, and the Commission is on the move. The agricultural authorities and others concerned in these Provinces, if on the alert, will be preparing to have the situation adequately laid before its members, so that ultimately Parliament and Government will be apprised of the truth and be put in a position to deal out even-handed justice to agriculture. The men of the farm are awakening to the seriousness of the situation, and in the reorganization or extension of our schemes of public education to stop short at the town limits and industries will just mean to impose further handicaps and burdens, of which the agriculturist cannot be expected to approve. Briefly, the plan of the Commission's enquiry is: 1st. What are

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PUBLISHED WEEKLY BY THE WILLIAM WELD COMPANY (LIMITED)

JOHN WELD, MANAGER

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the industrial needs of the locality or Province? 2nd. What is being done in the direction of technical education? 3rd. What are other countries doing in furtherance of technical education? and 4th. What should Canada do, and to what extent should it be sustained by the Federal Government co-operating with the various Provincial Governments which, under the constitution, have charge of education? There has been some apprehension lest university influences and industrial claims might result in the needs of agriculture not receiving their full share of attention, but from its leadership and the high character of its members we have reason to believe that the enquiry and resulting report will be both thorough, independent and comprehensive.

Teachings of the Wind.

Plainly written in the track of wind storms of exceptional severity experienced by several localities last month are a couple of lessons at least that we do well to heed. One of these is tree-planting and the preservation of wood lots. While the old inhabitant may say that, since no such "blow" had been witnessed for half a century it never could happen again, and therefore people need not worry over precautionary measures. But this is rather too easy going counsel. There is little doubt but what the destruction of our forests has a prejudicial climatic effect tending to increase the number and severity of atmospheric disturbances. It is no doubt true also that had some of these local storms occurred in treeless regions they would have gained a volume and velocity that would have absolutely levelled everything in the nature of farm structures, and strewn their pathway with death and destruction, of which these without actual visitation can have no adequate conception. It is accordingly indeed, when these storms are generated that the country is still fairly well supplied with blocks of bush, and which, with the wind-brake planted about fields and homes, break the force and gathering sweep of the wind. Apart from the value of growing forests for fuel and timber, con-

their beauty, the item of protection from either summer or winter storm is of tangible and almost inestimable value. Wood-lot preservation and tree planting should therefore be encouraged and prosecuted, both by public and private effort for personal and public good.

The permanence of farm structures is another consideration also to be kept in mind when the work of erection is being planned and executed. The collapse of so many roofless wooden silos before the untoward gusts of wind will have the effect of encouraging the erection of more substantial structures. The empty stave silo without a roof is too easy a mark for a gale, and many of them will soon be replaced by those of cement-concrete or other permanent material.

Need of Wool-grading Stations.

Mutton and wool production do not occupy a foremost place in the rank of Canadian agricultural products. Nevertheless, mutton, to an extent, and wool, to a large degree, is a commodity, required by all classes of our people; and the conditions are such that this will probably continue to be true. At the present time our population is not great, yet even now the woollen industry calls for the expenditure of much money. As the country's population doubles and trebles, this industry will be one of great importance. During 1909 Canada exported 1,079,261 pounds of wool, and imported 1,001,067 pounds, the total transaction representing around one million dollars, three-fourths of which was spent in purchasing wool from Britain and the United States. Evidently, then, there is a home market now for approximately one-third more wool than is produced in Canada. With the growth of the country, what proportions this will assume are readily seen.

A business of such magnitude, and with such possibilities, should be put upon systematic footing. At present there is no established market for Canadian wool, growers are left largely to the mercy of the buyer, and must accept his dictum regarding per cent. of dirt, length, strength and fineness of fibre, and be glad to sell at all. Canadian wool cannot compete with the surplus of other countries under such conditions. It would seem that the establishment of a plant for the cleaning, grading and classifying of the wool by disinterested experts might be one step in the right direction, as far as the Canadian wool trade is concerned.

"In Danger of Silence."

Editor "The Farmer's Advocate": The Canadian farmer has to endure much adverse criticism. His every action seems to be taken note of on all sides and commented upon. Some of this criticism is right and proper, and much of it is not so, but we feel certain that what we are about to say regarding a certain class of present-day farmers is not without truth, and we trust that there may be some outcome from it.

Many will perhaps question the truth of the statement that "Many of our farmers are in danger of silence." There will be a loud chorus of protests. Still, we believe that we will have the sympathy of many others in what we have to say, and since we have made the charge, the next thing is to prove it.

It goes without saying that the average farmer in Ontario is a hard, constant worker, and it is likewise true that in many cases he is descended from ancestors who were even harder workers. In this, perhaps, the strange law of heredity holds good. In too many cases the iron has entered into the soul, and work has become a fetish. The sole aim is to achieve something more, to make one more dollar, and body and soul become mere machines.

Under such influences, the outlook is narrowed, and we have a mind-set which is inclined to be developed only in one direction. What can there be but silence? In some cases, there is deep undeveloped a love of silence, and a stern determination in speaking not as little as possible.

The silence affects all departments of life. During the day, work is done, and there is little or no conversation. At night, when the family are in bed, the conversation is limited to the main "story." Another danger is that, in the quiet of the farm work, the farmer's mind is so busy with the possibilities of increasing production,

work, and an interchange of opinion to take place, the work going on all the better for it.

In the farm home this silence and its effects are again noticeable. At the table, where the family are together for a short time, the main object seems to be to eat large quantities of food in the shortest possible space of time, and all efforts are in that direction. The home life, as a whole, is not so pleasant as it ought to be, for this reason, that there is no interchange of opinions, and the wits become dull.

We have stated that herein lies a danger, and the word is not at all improper. There is a danger—danger that the head of the house become too silent and inspective. He manages his own affairs, and that spirit of co-operation which is the strength of a home is lacking. Constant silence of this kind produces stagnation. The mind becomes too much like a deep pool from which there is no outlet. Soon the individual is afraid of his own ideas, and hesitates to voice them. The result is a mind not fully developed, and a citizen who cannot serve his fellows as he might do.

There is also grave danger from the younger members of the family. In such a home the children will not develop naturally. They may even grow to mature years, and yet be without dependent action. In many cases they will leave the home as soon as possible for a brighter and more attractive sphere.

These reasons should be sufficient to prove the statement previously made. Homes such as we have tried to describe are not uncommon. The spirit is a relic of the past, and cannot long remain, yet we think that it does not disappear as quickly as it might. We are in the twentieth century. "Settlement" days are a thing of the past in Ontario, and the spirit of past times is not suitable to present-day conditions.

We note with satisfaction the efforts which are being made in our schools and colleges to deal with this problem, and develop in the coming generation the power of expression. We cannot expect the people of Canada to be all orators, but if they will, they can all be masters of good English, and such mastery can only come through willingness and constant practice. We must lay aside our conservative spirit, and also many of our old backwoods expressions and modern slang. They are both alike objectionable. But beyond all else, we would plead for a little more, aye, a great deal more, of interesting, intelligent, profitable conversation in the home.

ROBERT HALTON.

HORSES.

Frequently, a thorough washing with soft water and a good quality of soap, thoroughly cleaning the mane and tail, will put a stop to the scratching and rubbing that is spoiling the looks of a horse.

Three-year-old and four-year-old horses respond to extra care in the selection of tender hays and chopped grains more than one might expect. Their permanent teeth coming in, tender the mouth sore, and the power of mastication is imperfect for a season.

The whip is frequently a useful and necessary instrument called into play in the management of horses. It should never be used except to accomplish a definite purpose, and when that purpose is attained it should be placed at rest again. That it may be so used, the horse must be trained to know it, never to be in terror of it. To educate the horse rightly to the whip, accustom him to it as a colt, let him smell it, see it, pass it over his body and get him accustomed to it, as to the man in charge, so that he may come to regard the whip simply as part of the man. A few minutes spent every day in training a colt brings its return in satisfaction through all the years of its working life.

Horse-feeding Experiments.

In connection with the feeding of working horses some interesting experiments have been in progress in large farms the past couple of seasons. These experiments were based on a belief that a ration could be composed in which maize, oil, meal, cottonseed meal and ground meal could take the place of oats, and give the horse with a view to determining the effect of such a ration on the health, spirits and work of the horse, and also to determine the economy of the ration. In all five farm trials the results were as follows: While doing the same amount of work, one horse of each pair received the experimental ration, and his mate received the standard ration in place of maize and cottonseed meal. The weight that each animal gained was as follows: Oats and oil meal in place of maize and cottonseed meal, 224 lb. by weight. It was found that the experimental ration of oil meal than the standard ration of oats and meal as a part of the ration. Similar results obtained in other trials.

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meal was also tried, but it did not appear to be relished by the horses, and its use was soon dropped. The conclusion came to as the result of the experiments was that oats are expensive to feed in large quantities, and that the ration may be greatly cheapened by substituting oil meal, cottonseed meal or gluten feed. The health, spirit and endurance of the horses was the same when fed on maize, in combination with one of these feeds, as when oats were fed. A hard summer's work was done by the horses on these feeds, without any considerable loss of flesh.

Care of the Feet.

During the hot summer months, much trouble arises with the horses' feet. The young things go to pasture in the spring, and probably stay there most of the summer, without a great deal of care. The working horses, which do not have to travel on the public roads, are allowed to go unshod, and even those that are shod, having less travelling to do away from the farm, do not have as much attention given them as they do in the winter. As a consequence, many disorders of the feet arise.

The feet of stock on pasture very soon become ill-shaped, due to the growth and breaking of the hoof. Not only does the hoof grow faster, but the wear is frequently insufficient to keep the foot in shape. With young stock, the dangers of injury arising from excessive growth are serious, and the younger they are, the more serious is the danger. Their bones and cartilages are soft and pliable, their tendons less rigid. If the feet become misshapen, the legs are thrown out of the normal position; long toes and low heels have a tendency to weaken the pastern; long heels and short toes work a similar injury, though in a different direction. If the outside of the foot develops faster than the inner side, the pastern and fetlocks are thrown too close together; if the inside grows faster than the outside, they are thrown too far apart. With young colts, yearlings, and even two-year-olds, the continuance of any of these abnormal conditions of the feet is most serious. Their bones are becoming harder all the time, and if thrown out of the correct position, and maintained thus incorrectly for some time, the limbs become ill-set, and are likely to remain so. The younger the colt is, the more damage is done in a given time, since his bones are more pliable. Consequently, the sucking colt must be closely watched, while the older ones must not be neglected. Every few weeks the horse stock should be carefully looked over, and any irregularities in the shape of the feet corrected by use of the rasp and knife. All material trimmed from the feet should be taken from the grounding surface. Never, by use of the chisel and mallet, should the excess of hoof be whittled off.

Aside from the irregular growth of the feet, there are other evils that need watching. The hoof gets well wetted by dews and rains, but often the hot winds, the sun, the hot earth and the dry dust seem to take every bit of moisture out of it. It begins to crack, as a result of the excessive heat, gets brittle, and easily breaks. Under these conditions, quarter cracks frequently develop, especially at the plantar border of the hoof wall. These are almost as likely to develop in work horses going unshod as in young stock on pasture. Immediate attention is required to keep them from getting worse and the animal from going lame. It is best to trim the entire hoof into proper shape, then cut a small notch in the hoof at the base of the crack, to lessen the pressure on that part of the hoof when the animal walks; this lessening of pressure reduces the likelihood of the crack extending farther upward. Searing a scar crosswise at the apex of the crack also checks its extension. In a working horse, it is frequently necessary to shoe the animal until the crack is grown out of the hoof. The hoof is prepared for the shoe as described above, the idea of the shoe being to reduce the danger of an extension of the crack, which is most likely when a horse is at hard work.

When the feet are unusually dry and cracking, it is well to soak them. This may be done by standing the animal in a barrel prepared for the purpose, or by soaping so that it is about five inches deep, feet immersed in the bottom. Another method consists of placing in the front of a tie-up stall a large tray from sand and well moistened. It is desirable to moisten the clay thoroughly, by spraying it in the stall. During the day the animal may be tied in this stall, and at night he may be turned out. This, however, benefits only the front feet. Some competent horsemen take a blanket of heavy material, set long and 12 inches wide, and lay it over the hange or other strap, and soaking it thoroughly. They trap it about the hoof head over the fetlock, so that it may be pressed in the feet, or at least against the hoof, and do them much good. Moisture is also at the horse's feet, and what is most important, the most convenient to supply, which is water, should be regularly adopted.

Mistakes of Exhibitors.

The exhibition of high-class horses at "high class" horse shows is practically a business, and is conducted, in most cases, by those who thoroughly understand the game; hence to exhibitors of this class we have nothing to say, as they are better posted on "the tricks of the trade" than we are. But a few hints to the ordinary farmer or horse-owner who exhibits only at local fall fairs may be seasonable. The practice of taking untrained colts or horses into the show-ring is too common. It is a too common practice among exhibitors to pay no attention whatever to fitting or training their colts, but to take them to the fair absolutely green and unfitted, except that they have been taught to lead in a manner. They are brought before the judge in this shape, he looks them over, and then wants to see them move, but they have not been taught to lead properly, hence go sideways or backwards, or in some cases can with difficulty be induced to move at all. This is provoking to the judge, aggravating to the audience, and disappointing to the exhibitor, especially when his animal is probably a better one than the better-fitted and better-trained colt that wins. The judge in such cases is often very severely criticised and credited with not knowing a good animal. He is doubtless aware that the awards have not gone to the animals that under more favorable conditions would have won, but he is also aware of the fact that a little trouble is necessary to fit and train a colt for exhibition, and that each animal must show his action and gaits to enable any person to judge correctly of his relative qualities. He also should thoroughly recognize the fact that his judgment of the animals before him must be influenced by what they are at the time, not what they probably would be under different conditions. The general appearance of the unfitted and untrained colt may indicate that if fitted he would be a better animal, and if trained would show better action than those he selects for the awards. At the same time, the colt is neither fitted nor trained, while the others are, and he (the judge) also knows that a colt of good conformation and all indications of showing good action is sometimes a great disappointment when moved, and as he is judging entirely by what he sees, not from what he probably would see under different conditions, he is compelled to give the prizes to those that show what they can do. Then, again, the exhibitor who has spent time and money in training and fitting his exhibit so that it may appear at its best before the judge, deserves some recognition over him who has taken no pains in this line, but apparently simply brought his animals to the show with the hopes of winning a prize. Such an exhibitor takes no pride in his horses, but simply exhibits for the money he may win, and his winning seldom reflects glory to either himself or the exhibition. Even sucking colts should be taught to lead and stand well on the halter before being taken to the show-ring. When this is done there is less danger of accidents, it gives the judge a much better opportunity to judge correctly, and the exhibit a better opportunity to show just what it is. It will be noticed in this class that the colts that are trained to the halter generally win.

Another mistake often made by exhibitors is entering horses in the wrong classes. This is particularly noticed in roadsters and carriage horses. A good roadster entered in the carriage class is often beaten by horses not worth nearly so much money, while a good carriage horse shown as a roadster will meet the same fate. Here again the judge is often unjustly criticised. It is often claimed that because a horse is more valuable than the others he should win, even though he be wrongly classified. It should be remembered that the judge is judging a certain class, and he expects certain characteristics in each animal and those that approach more nearly to his ideas of perfect animals of that class

should win, notwithstanding the fact that there is a horse of another class that is worth more money. There are horses that are very hard to classify. While reasonably valuable and serviceable, they have not the characteristics of either class sufficiently well marked to make them reasonably typical, hence the owner is undecided how to enter them. In such cases it is not unusual to enter in each class, and after getting as good an idea as possible what the competition will be, exhibit in the class in which he expects to have the best chance of winning. Horses of this kind cannot reasonably be expected to win in reasonably good company in either class, although they may have a greater market value than those that win over them. It should be remembered that exhibitions are supposed to have an educational value, and it is the duty of a judge to be consistent in his awards, and stay as closely to type and general characteristics in the different classes as possible. Another mistake exhibitors often make when there is something wrong with their horses is to explain to the judge that the animal met with an accident very recently, and that caused the swollen leg, bunch, blemish or lameness, and that he would be all right in a day or two. Now, the judge cannot be held responsible for the accident; he did not cause it, neither could he have prevented it; but here is the horse, lame or unsound, the lameness or unsoundness may in all probability be only of a temporary nature, but in most cases the probable termination of the trouble is simply problematical, and he must judge the horses as they are, not what they were before the accident, or what they probably will be in an indefinite time. There are other animals in the class that have not met with an accident, but are sound, and unless decidedly inferior to the injured animal they should win. Of course in the breeding classes such things are looked upon differently, but in the utility classes the judge wants to award the prizes to horses that are as nearly all right as he can get them. It should be remembered by exhibitors that soundness, manners and action are prime factors in a horse. Manners count, especially in light horses, carriage, roadster and saddle classes.

In conclusion, I may say that one of the greatest troubles at the ordinary agricultural fair is the failure of the exhibitors to be on time with their animals. More time is often spent in waiting for the classes than in judging them, and often even after waiting a long time for the entries, after notice has been given, or where there is a time programme, if a class be judged and the prizes awarded and a tardy exhibitor appears afterwards with his entry, there is a great cry; he blames the directors, the judge, and everybody, and wants the class called again and rejudged, and of course he knows that he should win. Exhibitors of this kind make it very unpleasant for everybody, and, in our opinion, no notice should be taken of their complaints or reasons for being late, and a few lessons of this kind would teach them to be more prompt. "WHIP."

LIVE STOCK.

Both humanity and the welfare of the pocket-book suggest that if there is no natural shade in the field, the sheep should have artificial shade, as dark as possible, something into which they can retire in the middle of the day, when the heat is a burden, and when the flies are a great nuisance.

Sheep seldom die from grub in the head. More of them become weak and perish from disease, because of lack of "grub" in the stomach; but one of the best ways of preventing suffering of the sheep, and "sweny" of the farmer's pocketbook, is to provide shade in the sheep pasture.



A Section of the London Shire Horse Show 1910.

Marketing the Wool Crop.

The question of a wool tariff is being well threshed out by the sheep and wool-growers these last few weeks. It is, perhaps, the easier of the sheep problems to settle, and so has been attacked first. When it is wiped off the slate, we trust that the problem of constructing an extensive, profitable, permanent sheep industry will be as effectively undertaken by the rank and file of producers.

J. P. Murray, Toronto, makes a number of valuable suggestions to aid in the encouragement of this business of wool production, which we submit for the thoughtful consideration of our readers here:

1. Decide what parts of Canada are most suitable for some breed of sheep. First, by Province, and again by section of a Province, for class.
2. In sections of Province, let there be delivery sheds, to which a grower may bring his clip and pelts, where an expert will decide on proportion of dirt, and issue a non-negotiable receipt for wool and pelts.
3. The wool and pelts will be cleaned, then sent to a provincial center, which will be a mart for all the wools of the Province.
4. On receipt of wools at the Provincial assembling-shed, certificates will be issued to the growers for quantity and class delivered at the section shed, less dirt, burrs, etc. This certificate will be negotiable.
5. A general Canadian wool mart should be established in the most adapted center, to which daily returns of wools on hand in each Provincial assembling-shed will be made.
6. All wools should be standardized for (a) length and strength of fibre, and count; (b) average for waste and dirt, and loss in scouring.
7. All wools imported should be classed and defined for manufacture, each wool to be valued in relation to any Canadian wool which may or could be used in its place.
8. All imported fabrics should be dissected, and the class of wool defined and quantity approximated, such wools to be valued in relation to Canadian wool which may or could be used in its place.
9. The quotations of the world's markets should be daily known at the Provincial assembling-sheds; also, available supply, freight and insurance from market to leading manufacturing points, and to any point in Canada. Also, freight rates from and to internal Canadian points.
10. Each Provincial assembling-shed should have proper packing facilities, and establish a uniform standard weight for Canadian bales.
11. Destructive dogs may be killed, without responsibility.
12. Government contracts to call for Canadian wool (when possible) and Canadian labor.
13. Official statistics be prepared to show kinds of sheep, number of returns for wool, mutton, tallow and hides, by Province and class.
14. The cost must be borne by the products. Many of the above are excellent suggestions, and are along good lines. The desired improvements cannot be effected at once, and can only result from an educative campaign, the real interest of the public, and the co-operation of the manufacturers and farmers.

Crippled Pigs.

Speaking of the breaking down of the hind quarters in sows and young pigs, Doctor McIntosh, of the Illinois Agricultural College, writes:

"This is a very common disease in sows and young, growing pigs, especially in fine-bred pigs."

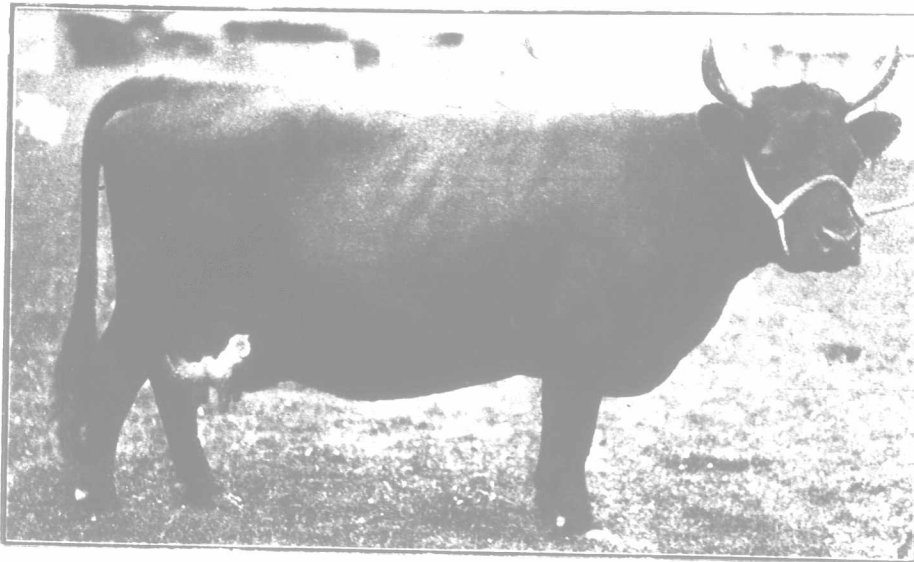
"I have investigated this derangement, and find that it is caused by a want of sufficient phosphate of lime in the nerve system, especially the nerves supplying the hind legs. It is a known fact that the bones and nerves of pregnant animals are deficient in phosphate of lime, on account of the drain on the system for phosphate to build up the fetus, and also to nourish the young after they are born. There seems to be more of a drain for phosphate on the system of the sow than any other female animal. The sow is more frequently affected with partial paralysis a few weeks after farrowing, although the derangement may occur before farrowing."

"To prevent this trouble, the sow should be fed on ground oats, bran and oil meal, and as much milk as possible, during pregnancy, and while suckling the young pigs. Should the trouble occur at either of the above-mentioned periods, the following treatment should be begun as soon as the animal shows the first symptoms of weakness in the hind legs, or knuckling over at the fetlock joints; of course, cases can be cured even after the animal is down and cannot get up. Give one tablespoonful of cod-liver oil, fifteen grains of phosphate of lime, and three drops of the fluid extract of nux vomica at a dose, twice a day, in a little food. In the young growing animals there is a great demand for phosphate of lime to build up all the tissues of the body, especially bone and nerve, so the young shoats should be fed on ground oats, bran or middlings, and about two tablespoonfuls of oil meal at a feed, or a dessertspoonful of bone meal at a time

mixed in the food. Shoats above three or four months old should be given half the above-mentioned quantity of medicine. This treatment should be continued several weeks if needed."

The Summer Silo.

Corn-belt farmers are having preached to them a lesson which they should learn this summer, viz., to prepare for summer feeding by the filling of a smaller silo for summer use. This is a dry year in a great deal of the West and Middle West. As a consequence, grass is short and dry; milk cattle and beef cattle are in need. Too many of us are like the man who, on being remonstrated with for not patching his leaky roof, replied that in wet weather he could not, and in dry weather he did not need to. Such seasons as the West is now having are not unknown in most parts of Canada; more than once have two or three such seasons succeeded each other; in truth, there is



What Breed is This Cow, and Why?

(See breed-study contest.)

scarcely a summer which does not have a considerable period of hot, dry weather, when grazing is too short to be economical. For that reason of the year every dairyman should make provision for his cows. The summer silo has demonstrated its utility for that service. And even when grazing is good, judicious feeding will be more than paid for in the milk returns. When putting up a silo, do not overlook or forget to consider the use of silage in summer, and the storage of it.

Iowa Cattle Experiment.

Recently the Iowa Experiment Station marketed forty head of yearling steers which had been carried experimentally. The objects of the experiment were: First, to compare calves with older animals in economy of gain; second, to compare silage vs. dry feed; third, to compare cottonseed meal and oil meal as supplements to corn and cob meal in fattening young animals. The experiment began November 19, 1909, and ended about June 15, 1910. The calves were divided into three lots of equal size, type and quality. One lot was fed corn and cob meal, silage clover hay and cottonseed meal; a second lot was fed of the same feeds, omitting the silage; while the



A Prince Edward Island Flock of Leicesters.

third lot was fed similarly to the second, save that oil meal replaced the cottonseed meal. A conspicuous fact noticed in the result was the economy of gains on all lots. The first lot made gains at a cost of \$6.29 a cwt.; the second lot at a cost of \$5.67 a cwt.; and lot three at a cost of \$6.39 a cwt. These prices are about 55 per cent. of what the gains on two-year-old steers cost in Iowa. The lot which received corn and cob meal, clover hay and oil meal made the most rapid gains, had a higher finish and sold for most; the lot receiving silage stood second in rate of gain, first in economy of gain, and sold second highest. The most important fact brought out by the experiment is the advantage arising from early finishing of beef cattle for market.

Costs of Beef-making in Colorado.

An interesting experiment in beef production has recently been completed in Colorado. Colorado is a hay, oats, barley, wheat and root-growing State, and consequently their methods and results are interesting to Canadians. There were thirty steers, divided into three groups. The corn-fed lot sold at \$7.85 per cwt., the barley-fed lot at \$7.60 per cwt., and the combination lot at \$8.00 per cwt.

The cattle were put in the lots on December 1st. The thirty head were fed together on alfalfa hay until December 11th, when they were divided, reweighed, and the experiment really begun. Ten head were put on a ration of alfalfa hay and ground California feed barley, ten head on alfalfa hay and corn chop, and ten head were started on alfalfa hay, sugar beets and cotton cake. This third lot was fed on this ration until about the middle of March, when corn chop and molasses were added, replacing the sugar beets, this change

in feed on this third lot being made at this particular time for the reason that, as a rule, the pulp at the sugar factories is usually exhausted about that date. When the steers were reweighed, on December 11th, the barley lot averaged 663, the corn lot 668, and the combination lot 673 pounds, and they gained right along in the same relation up until about April 1st, when the barley cattle began to fall behind. The combination lot continued the heaviest until within two weeks of the finish, when the corn lot made their heaviest gain, nearly 4 lbs. per day, while the combination cattle gained a

little less than 3 lbs., and the barley cattle only about 1 lb., during the last two weeks of the experiment. This was probably due to the hot weather, and, the syrup being very heating, the cattle ate less of it. In feeding the two bunches on barley and corn, they were given the same number of pounds of each ration per day, and all three lots consumed practically the same amount of hay per day. The difference in the cost of the feed makes the combination cattle the most profitable from the feeder's standpoint, and they also showed the most finish, not only as live steers, but also in the beef, although, as a lot, the chucks on the corn steers were a little better covered than on either of the other two bunches. The average net profit on the three bunches of cattle is \$1.00 per head on the barley cattle, \$7.50 per head on the corn cattle, and \$10 per head on the combination cattle. In this experiment, alfalfa hay was figured at \$8 per ton, corn chop at \$1.20 per cwt., barley at \$1.20 per cwt., cotton cake at \$32 per ton, and syrup at \$9 per ton.

Honor Roll of Shorthorns.—VIII.

By J. C. Snell.

While the exhibit of Shorthorns at Toronto in 1893 was not so strong numerically as usual, owing to several herds being at the Columbian Exhibition at Chicago, and not having returned in time for the home show, the best of those brought out were up to a good standard. The winner in the aged-bull class of eight entires was War Eagle, a very smooth and symmetrical red four-year-old son of Imp. Warriare, bred by Arthur Johnston, and shown by John Currie, of Everton. He was the champion Shorthorn bull of the show. J. & W. Watt's Clan Stewart, by Barmpton Hero, was first in the three-year-old section. John Miller & Sons' Duthie-bred red and white Sittyton Stamp was the first prize yearling in the stylish roan. Riverside Hero 2nd, Strathallan of Kent, by Sir Christopher, a remarkably level roan two-year-old heifer, shown by Simmons & Quirie, was first in her class and champion female.

At the Toronto Exhibition, in 1894, the winning aged bull was C. M. Simmons' massive six-year-old roan Royal Saxon =10537=, bred by W. J. Biggins, Clinton, and sired by Excelsior, a bull of Booth extraction, bred by Edward Cruickshank, and imported in 1884 by John Dryden. A prominent figure was the red Duthie-bred bull, Prime Minister =15280=, first in the three-year-old class, imported by D. D. Wilson, of Seaforth, a brother-in-law of Mr. Duthie, and shown by John & Wm. B. Watt, of Salem, a massive bull, of good quality, a grandson of the famous Field Marshal. The champion of the year was found in the two-year-old class, in the Bow Park-bred bull, Lord Outwaite, a strong roan son of the great show cow, Lady Isabel (imp.). Second to him in his class was the wealthy-fleshed Royal Member, bred

Colorado. production has Colorado is owing State, results are in thirty steers, fed lot sold at \$7.60 per cwt. member 1st. alfalfa hay divided, regun. Ten a hay and on alfalfa started on ke. This about the and molasses this change this third made at this time for that, as a ulp at the ctories is exhausted date. When were re- in December barley lot 663, the 88, and the n lot 673 nd they at along in relation up April 1st, barley cat- to fall be- combina- continued the til within of the fin- the corn lot r heaviest 4 lbs. per the combi- gained a ttle only of the ex- to the hot- ating, the o bunches same num- all three at of hay cost of cattle the standpoint, finish, not beef, al- corn steers her of the profit on head on corn cat- on cattle. red at \$8 barley at ton, and

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at Kinellar, imported by Arthur Johnston, and shown by H. Cargill & Son, in whose herd he was profitably used for years. The winner in the yearling class that year was Aberdeen, a compact and truly-made red bull, imported in dam by John Isaac sired by Sittyton Sort, and shown by "Long John" Miller, of Markham, which had been given first place the previous year in the bull-calf class, Wm. Linton and the writer being then the judges, and his strongest competitor, the substantial white calf, Valasco 22nd, sired by Nonpareil Chief, and shown by R. & S. Nicholson. The "bench" differed in their opinions, but Judge Linton kindly gave way. When our work was done, so good a judge as the late Hon. John Dryden said to me, calling me by my "nick" name, as we had been boys together at the fairs, "Why did you give that little red calf first place?" I replied, "Because I am sure he was entitled to it." Said Mr. Dryden, "He will never be anything but a pony." The two came together next year as yearlings; both had been in good hands, and had gone on well. The judges, John T. Gibson and Edward Jeffs, placed them the same as they were placed the previous year. It so happened that Mr. Dryden and I stood together when the award was made, and I asked him, "What do you think of it now?" He answered, "It's all right; the red bull has exceeded my expectations." Aberdeen was sold to a breeder in New York State—Aaron Barber, I think—and made a fine record in prize-winning there.

A dark-roan bull named Royal Sailor =18959=, imported in 1893 by D. D. Wilson, of Seaforth, bred by W. S. Marr, of Uppermill, got by Sea King, dam by William of Orange, was shown in the yearling section at Toronto in 1894, and failed to get into the prize list, though the writer and others thought he might well have been placed near to if not at the top. He was a little unfortunate later in the show-ring, but as a sire of prize-winners in the Watt herd, the records will probably show that he stands among the three most successful in the annals of the breed in Canada.

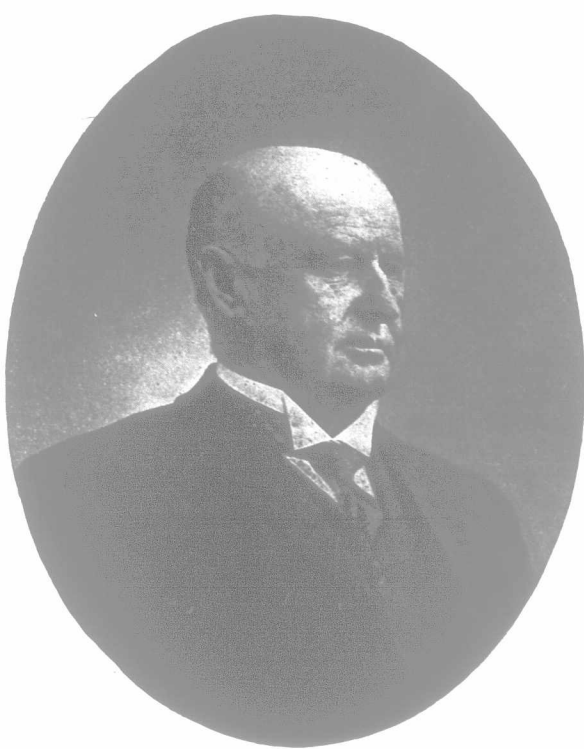
The champion female this year was Messrs. Watts' first-prize aged cow, Ruby Vensgarth, a red seven-year-old daughter of Mr. Dryden's bull, Vensgarth (imp.). She was bred by Samuel Holman, of Columbus, Ont., and was first in the aged cow class at Toronto twice in succession. A remarkable record in the showing of calves was made at Toronto in this year, when, in an unusually strong competition, Simmons & Quirie, of Ivan, won the first prize for bull calf, and the first four prizes for heifer calves, with get of Mina Chief =13670=, bred by Arthur Johnston, sired by Indian Chief (imp.), and fitted by Lauchie Cameron, an unprecedented and unequalled record at a Toronto show.

In 1895, among the best bulls shown was W. C. Edwards & Co.'s Duthie-bred Knight of St. John, first in the aged class, a red bull of great scale, good character, long, level quarters, a model Shorthorn head, and long, full thighs. In the three-year-old section, Messrs. Nicholson's Norseman, a red son of Indian Chief, bred by Arthur Johnston, led in the prize list. In the two-year-old division there was a very close match between Simmons & Quirie's Barmpton M., a roan son of Barmpton Hero, bred by Messrs. Watt, and Harry Smith's Abbotsford, a roan son of Blake =15177=, bred by the exhibitor, and out of a Village Blossom cow. They were, after considerable conference, placed in the order named, a ruling which, judging from the future record of the two, would appear to have been a mistake, for which the writer was responsible, as Abbotsford shone in the show-ring for years afterwards, while the other was evidently retired soon after that showing. The tussle for championship that year was between Knight of St. John and the first-prize yearling, Moneyfuffel Lad =20521=, a light-roan son of Topsman, bred by J. & W. Russell, and shown by the master fitter, James Leask, of Greenbank. This youngster was the strongest of his age, or, indeed, of any age, shown for many years before or after, winning the championship three times out of four years' showing. The first-prize cow and champion female of the year was Senator Edwards' massive roan, Bessie of Rockland, and the same herd supplied the winner in the three-year-old class, in Missie 142nd, bred by W. S. Marr, of Uppermill.

In 1896, Moneyfuffel Lad conquered the white bull, Lord Stanley, junior champion of the Columbian, the latter being shown in the three-year-old form; and in 1898, when shown by Captain Robson, the Lad, fitted by Harry Coltham, was again male champion, while the Captain's white heifer, Mysie's Rose, was the champion female. Moneyfuffel Lad was remarkable for his combination of substance, smoothness and handling quality of hide and hair, and was a distinct credit to his breeders, and to those who carried him in his show-ring career.

In 1897, Capt. Robson's Nominee, by Earl of Moray, fitted by Coltham, was first and grand champion male, and the Captain's white heifer, Mysie's Rose, by Royal Chief, by Indian Chief (imp.), was again grand champion female. She was one of the very best ever shown in this country.

In 1898, Captain Robson brought to the front at Toronto, fitted by Coltham, the noted red bull,



Hon. W. C. Edwards.

Topsman =17847=, at seven years old, bred by the Russells, and sired by Stanley. Topsman was a bull of uncommon smoothness of form and flesh, and a very successful sire of high-class stock. He had a rather strong and upturned pair of horns, which somewhat discounted his appearance, particularly in his younger years, but the balance of his make-up was so nearly perfect that one easily overlooked his headpiece. My first sight of Topsman was at the Winnipeg Industrial Exhibition, in 1895, where he was shown in the aged class by J. G. Barron, of Carberry, who had purchased him from the Messrs. Russell. He was not then in



Topsman.

high condition, and his horns and curly-haired head so much resembled that of a bison that I gave him the nickname "Buffalo Bill." James Russell, who bred Topsman, was the single judge at that show, and when his class was called, Mr. Russell asked the director in charge to excuse him from passing judgment on that section. The writer was chosen to make the awards, and was criticised by some bystanders for placing Topsman ahead of W. S. Lister's large and stylish light roan, Gravesend's Heir 2nd. But I was never surer of my ground, though the latter was a right-good bull. In 1896 Topsman was third at Winnipeg, Gravesend's Heir being placed above him by John



Captain T. E. Robson.

Dryden and Richard Gibson, but in 1897 Topsman was champion there, and it is safe to state that sons and grandsons of Topsman, in the hands of J. G. Barron and others, have won more championship awards than the progeny of any other sire in the West.

In 1898, Topsman not being shown, owing to an accident to his owner, the first-prize aged bull at Winnipeg was Caithness =22065=, a red of great scale and smoothness, bred by A. W. Smith, of Maple Lodge, Ont., sired by Jocelyn, by Vice Consul (imp.), and shown by Hon. Thos. Greenway. The tug for the championship there was between Caithness and Judge, a light-roan two-year-old, bred by the Watts, of Salem, Ont., sired by Royal Sailor (imp.), and also shown by Mr. Greenway. Judge being declared the winner, Thos. Russell, of Exeter, Ont., being the single judge of the class. The champion female at that show was the very fine red two-year-old, Gem of Athelstane, in the Greenway herd, which was first in her class, as she had been, also, the previous year. She was bred by Israel Groff, of Alma, Ont., got by Lindhurst 2nd, dam by Barmpton Hero, and was rightly named a "Gem," being symmetrical, finished, and full of quality.

Reverting to the Toronto winners of 1899, Topsman was, as before stated, the champion bull, competing with such good ones in his class as his half-brother, Duncan Stanley, shown by the Russells, who bred him, and with Harry Smith's Abbotsford; also for the sweepstakes with Captain Robson's first-prize two-year-old, George Bruce, which, in his class, was placed above Imp. Marquis of Zenda, by such capable judges as James Smith and Wm. Linton, though not with general approval.

(To be continued.)

Advanced Registry of Merit.

The work of advanced registration of milk cows carried on under the Department of Agriculture at Ottawa is directly under the supervision of Daniel Drummond. Three men are kept constantly busy amongst the herds being tested, of which there are now about ninety. Wherever such work is prosecuted marked improvements are noted in the feeding, care and management of the milk cows. This is perhaps the greatest benefit that comes from the work. Men learn that careful, thoughtful feeding pays handsomely. Almost every man who has cows under test for advanced registration has made or is learning to make provision for silage for summer feeding. Wherever the grazing during the later summer has been thus supplemented it has proved so profitable that the plan becomes permanently adopted.

THE FARM.

Wood-lot Management.

Editor "The Farmer's Advocate":

My letter in your issue of June 30th appears to have been a little ambiguous. It was a general statement intended to show that as good timber as ever grew in the Province may yet be grown on the farm lands of Ontario, and that it is possible to make existing wood-lots far more profitable than they are.

I shall try here to clear up the questions raised as well as can be done generally. Specific information as to all that should be done in the management of a wood-lot depends so much upon the quality of the soil, the local markets, the species of timber available, that it can rarely be given without a personal examination of the land, and then would be too long and of too local a nature for such correspondence as this. Detailed expert information can likely be obtained from the Provincial Forester at Guelph.

This question is interesting only to those who own their farms. It is most interesting to those who feel almost or quite as well rewarded when they have added \$500 to the value of the farm as when they have deposited an equal sum in the bank.

If a man who has a run-down wood-lot on good arable land wishes to secure the quickest cash returns from that land, he can probably do so by cutting the timber and growing field crops. In considering this he must not forget, what the editor of "The Farmer's Advocate" suggests, that there is more clear profit in the money from the wood-lot than from the field crops when so much labor is expended. All I wish to point out is that if a man has kept the wood-lot in timber and applied the same intelligence and skill in managing it as he would devote to the remainder of the farm, he will find himself just as well off at the end of 20 or 30 years, and less troubled with backache than if he had cleared it and grown the usual crops. I am sure that, considering the increase in the price of timber, an increase which promises to continue, it would have paid many of the older farmers now living to have kept a block of the original timber on their farms, for sale now, better than it has paid them to clear it all and work the land.

Whether a man maintains his wood-lot or not

should depend upon these business considerations, upon a desire to make the most of the land. The welfare of the country is best served when each man makes the best permanent use of his land. I think that the best permanent use of the land is to have a part of it under timber and well managed. I haven't a doubt but that if a wood-lot is not well cared for the land should be cleared and cultivated. It is as necessary to use brains in the wood-lot as on the remainder of the farm.

Of course when scrubby timber is cut it will produce rough fuel. That is one reason why it should be cut first, so that it will not go on growing larger to produce a still greater proportion of undesirable wood. Selection in wood-lots has been in the wrong direction. The best trees have been taken, so after that only the worst are left. The first step in improvement must be to get this inferior stuff out, and either by the encouraging of existing valuable species or their artificial introduction to give the wood-lot a new start. Also, when mature trees of valuable species have done their duty in seeding up the ground they should be cut, both because their removal will give young ones more chance, and because if they have reached the limit of their development and the price of lumber is not increasing faster than the interest charges, they have reached the period at which they can be most profitably sold. After all such trees are removed there will be a period of years during which there will be no annual income, excepting perhaps fuel and wood for farm purposes, but if the wood-lot is well stocked, every year will see one or more cords of wood added per acre, and if the trees are of valuable timber-making species, a correspondingly larger value added to the price of the land. When the timber reaches the pole stage thinnings may be made at small profit, care being taken to always leave the best trees. The chief value of a thinning lies in the improved condition and more rapid growth of the remaining timber. Pruning is very seldom worth while; the trees should be close enough together to prune themselves.

Nearly all Ontario trees will successfully seed in an even heavily-sodded ground if stock and fire are kept out. There can surely be no farmer in Ontario who has not seen the heavily-sodded ground under old elms, maples, oaks, black cherries and pines covered with young seedlings. Of course the sod is an obstacle, many of the young trees are choked out, and much better progress is made if the turf is broken, but even without this, in the long run the trees win out. The only difficulty is that trees with heavy seeds do not scatter their seeds very far.

A shelter belt around the wood-lot begins to keep the leaves from blowing out of the wood-lot as soon as it reaches a height of three or four feet. Whether a shelter belt is necessary or not depends altogether upon the configuration of the land and the amount of underbrush beneath the trees. It is only necessary where sweeping winds blow the leaves away and prevent a surface mulch from forming.

It is not to be expected that the matter of wood-lot improvement or farm forestry will develop rapidly until its advantages have been demonstrated. Fortunately, the Ontario Government has now under forest management waste lands that will before long show that what foresters claim is not an idle theory, but actually a productive department of human activity.

I shall conclude with this well-authenticated instance of profit from a wood-lot, as quoted in the New England Farmer. It is to be noted that the soil in this case was very poor, that the forest conditions for tree growth are not so favorable to white pine in Massachusetts as is much of Ontario, and that the trees were planted so far apart that they were hardly likely to make economical height, growth or produce clear lumber.

"Daniel Seaver, of Tewksbury, Mass. recently sold the pine growth on three acres of land for \$500.00; or at the rate of about \$166.66 per acre. These pines were set out by his father some forty-five or fifty years ago. Mr. Seaver's land consists in part of rich bottom land, and the north of this bottom land abruptly terminates on the borders of a sandy plain.

"At the time his father set the trees this plain land was nearly destitute of soil. Mr. Seaver's father commenced setting pines on this barren waste to prevent the sand from blowing onto his productive fields, which it did when strong northerly winds prevailed. The pines were set in straight rows, about forty feet apart between the rows, and much thicker in the rows. As the trees became too thick they were thinned out for wood.

"After the elder Seaver commenced to set trees, in the course of four or five years, as he could find time, he set out from ten to twelve acres. The larger part had been cleared off, and the three acres recently sold was the last of the growth. Mr. Seaver says his father did not realize any personal benefit from his labor, but he gratefully appreciates the benefit he has derived from it.

"Mr. Seaver has about two acres of land of the same kind, from which the timber was cut several years ago, with the exception of three or

four large pines which were scattered over the lot. He says these pines have seeded the land, and young pines have sprung up sufficient to set 1,000 acres of land. This seems to make it clear that in clearing a pine lot it is well to leave a large pine occasionally to seed the land."

H. R. MacMILLAN,

Dominion Forest Service.

Reforestation.

By Prof. A. W. Kneeland, M. A., D. C. L.

It seems to me that surely the day has gone by when it needs argument to convince anyone that the question of reforestation is one of the most vital questions before this country, as it is to a still greater degree before the old countries of Europe.

Devastating floods, denudation of soil, destruction of life and property, failure of water supply for domestic and manufacturing purposes, diminution of rainfall, and the consequent lessening of land products, are but some of the evils directly traceable to the cutting down of our forests, and that in these days over vast areas of land that can never be utilized for cultural purposes, such as rocky hillsides and swamp land that cannot be drained.

One has but to journey across the continent to find hundreds of such barren localities, that but a few years since were supporting dense forests of



In a Eucalyptus Forest.

Near Los Angeles, showing 27 years' growth.

valuable timber, now become a prey to the flames or the woodman's axe, while the soil that supported this life and stored up unbounded supplies of water for the plains below, is being washed away, leaving but the bare rocks turned up to a pitiless sky.

Had the ruthless fires and the cutter's axe spared all the small timber of these areas, the future of this country would have been different from what it will be, both as to climate and financial destiny, but something can still be done to repair the almost hopeless damage that has been done, and that something must be reforestation, according to some well-considered, persistent scheme that will once more clothe our barren and drifting sand lots and rocky hillsides with growth and beauty.

It may be thought by some that barren, desert sand cannot be made to produce trees, and that it will not pay to make the attempt, even should it be possible. I hope to show in the course of this letter that it is not only possible to recover our mountains and swamps with valuable timber, but that it will pay to do so, even within this generation.

Perhaps the most hopeless, barren, rainless desert tract in the world is that known as the Great Desert of North Africa, and perhaps the least happy nations of the world to conserve natural resources and discover new ones are those nations of semi-barbaric people occupying the narrow fringe of fertile land along the northern coasts of Africa, yet these nations have become so cursed with the value of trees, both in relation to their direct returns and to their influence upon general conditions, that, prior to 1881, over 200,000,000 date palms had been artificially planted within the borders of the Great Desert, and it is being found that, when once rooted, these trees will produce

neath all the moisture needed for their growth, each becoming in a small way a distributor of moisture to the dry and superheated atmosphere of what was a hopeless desert, and so changing for all time to come the climate of that region.

From the experiments already successfully made it is inferred—correctly, no doubt—that the whole of the Great Desert can be covered with food-producing and timber-producing trees, each worth directly in food-producing power at least five hundred dollars to the country wise enough to make the investment, and indirectly of incalculable value in its influence upon soil and climate.

In Southern California, Spanish-Americans gave but little heed to the comparatively scarce timber supply, as they built adobe houses and churches, and needed almost no fuel, but, with the coming of settlers from the Eastern States, Canada, and Central and Northern Europe, timber became more of a necessity, and the few forests along streams and in mountain valleys were cut away to the great loss of that region.

Among the descendants of the old Spanish-Americans was one Adolph Sutro, who made a fortune in draining the "Comstock Lode" by the largest and most costly drainage tunnel in the world.

This fortune he invested in barren hills, broken-down mountains and sand-dunes about San Francisco, California. These hills were almost entirely crumbling rock, and the sand-dunes were supposed to be hopelessly devoid of the means of supporting vegetation; yet, Sutro saw in them mines of gold, not to be dug out of rocks and sand by pick and shovel, but to be coaxed up from the depths by growing trees which would also ease their benign influence over the whole neighborhood.

Accordingly, in the year 1880 he began planting these wastes with trees, covering about one-half of the whole, which was about 3½ miles.

One man, with helpers, planted, in three years, from 1880 to 1883, about four million young trees, at a cost of about \$120,000, or three cents per tree planted. The trees were of four species of fir and two of eucalyptus.

The trees were planted twenty feet apart; 95 per cent. of them grew, and still flourish, and new trees are springing up everywhere, until there is a thick growth of tall, handsome trees, of great value.

Now for results. Twenty acres of this land have been donated to the University of California, and the "United Colleges" now stand on these grounds; broad avenues have been cut through the forest, and sites for residences have been cleared, so that the original forest has been made very much smaller. But one million dollars were recently offered for the standing timber on the residue, and refused.

As evidence of the great value of these trees to-day, permit me to state that I saw many being drawn down into the city, a distance of four or five miles at most, for which \$5 each was paid for haulage alone, and a team could draw five, and make two trips a day.

The land was almost valueless thirty years ago; to-day it is valued at \$12,000 per acre at a moderate valuation, and the whole 3½ miles, less lands sold off or turned into streets and avenues, is estimated to be worth \$7,000,000.

If this were all, my tale would be hardly worth telling; but it is not for, on entering the forest to-day, one is struck with the deepening soil, moist and black, and with the drip from the long leaves of the moisture condensed thereon at night, which is beginning already to find a way out into the light, in the form of springs at the base of the hills.

To a considerable degree this forest has changed the climate of the locality, and has been a veritable gold mine to its owner.

But some will say that these cases are from afar, and are, therefore, not applicable to our own conditions. Let me now refer to cases that are applicable, and first of all to that of Tully Mountain, near Orange, Mass. In the winter of 1877-8, my brother was one of a gang that cleared one side of Tully Mountain of its timber, cutting everything in sight, even down to saplings small enough for barrel hoops. The area cleared was about 100 acres; the land was worthless for agricultural purposes, and was sold after clearing for \$1,100.

Reforestation in this case was that which nature will effect almost everywhere in our latitude, if fire and beast are excluded; hence, without cost, this area grew up to a dense growth of white pine, chestnut, oak and white birch, best fitting to the looseness of the rocky soil and to the aridity of the heart of nature.

After holding this lot for about 30 years, its present owner, though large quantities of timber had been cut out in the thinning process in the meantime, has sold the standing timber, reserving the land for \$15,000, a very fair return on an investment of \$1,100 for thirty years, especially when one remembers that good interest had been drawn from the lot all along the years, from the sale of the thinnings aforesaid.

In this case, and I must leave this most interesting question subject to others.

When 27 years ago, when the swamps of the Great Desert were rapidly filled by the settlers

from the East, one far-sighted man, who had been accustomed to the beauties and benefits of forest growth, and who believed that there was money in trees, showed his faith by setting out a plot in the eastern part of the State, near the then Village of Plainview, and about twenty miles from the Mississippi River, with such rapid-growing trees as had been recommended for prairie growth.

The cost of afforesting this tract was about \$20 per acre, or \$600 in all; the value of the land about the same at that time, and the annual value of the investment, at 8 per cent, simple interest, about \$96 per annum. The cost for care, after planting, was practically nothing, and what little there was, was more than met by the value of thinnings after a few years of growth.

Within 35 years of the date of planting this plot, the owner was able to retire to the town and live in comfort and comparative luxury upon the sole proceeds of timber sold annually in small lots from this 30-acre plot, leaving, at the same time, all the smaller growth for the days to come. And so, with proper care, generations to come may live and thrive on the fruits of one man's foresight in the days not so long ago.

These are the monetary advantages flowing from reforestation; who can estimate its value to climate, scenery, eye, to character itself?

The writer happens to be one who believes that men are made better by seeing things grow, and by holding converse with things that, while they dig deep down into mother earth for her treasures, point with manifold fingers up toward the God of the universe.

Commercial Fertilizers.

Just now the farmers of Old Ontario are being pressed by enterprising firms and agents to purchase commercial fertilizers. It will be well for the farmer, under such circumstances, to do some careful investigating, some careful experimenting, and to do a good deal of hard thinking, before investing extensively in any such products.

For one thing, the farmer must be careful to give the soil only what it needs. To add to the soil what it already possesses in abundance, is a waste that eats its way into the profits. On the other hand, to sow grain in a field that is lacking in an essential for plant growth, is to pave the way towards certain loss. Some fields yield an abundance of straw, but the grain tests light. Here we have a clear case of lack of available phosphoric acid. A proper addition of this ingredient is almost sure to be attended with profit. Soggy potatoes indicate a need of sulphate of potash, or of wood ashes. Further, many a field falls behind, not because its soil is not rich in the proper soil constituents, but because it lacks underdraining and sufficient cultivation. The farmer must study his farm in detail before he can afford to make costly experiments in this or in any other particular.

Again, making such an experiment requires a good deal of time and considerable experience before results become instructive. Sometimes the alleged results are due to causes quite remote from those alleged. The plot experimented with is usually well prepared before sowing, and particularly well cultivated during the season. Then, the fertility of a field varies greatly, even within the distance of a few feet.

Indeed, the farmer who is eager to improve the fertility of his land will do well to lay the stress of his energies upon the feeding of cattle on his own farm. Buying manure often means buying weeds—a thing no farmer can afford to do. In buying grain for feed, grinding and feeding reduce the weed menace to a minimum, while the growing of the necessary clover and roots is the best kind of fertilizing and cultivation.

Not that the writer would discourage the use of artificial fertilizer, by any means. He has used it himself, and he has known his neighbors to use it, with good results. His one wish, in writing this, is to warn others against supposing that commercial fertilizers may be used indiscriminately, and at the same time with profit, or that they are in any way an effective substitute for good seed or for cultivation. If used intelligently, in view of the soil's needs, and with an eye to effecting a special result, as stiffening the straw or increasing the weight of the grain-berry, or for developing bran in, or for giving meadness to potatoes, or color to fruit, commercial fertilizers serve a valuable function. Clearly then, the farmer who would obtain desired results, must understand the use of farm chemicals, as a skilled physician understands the use of drugs, or of special foods designed to help the human body.

It is not to be thought that good commercial fertilizers are in the same class as pure tonics or stimulants. They are far more than that, as they furnish actual soil constituents, and should be used, as agreed to supply what the soil lacks. Used intelligently, they are a great help to supplement a soil that with what stockmen describe as a "good" nature. These are the days when labor is scarce and dear. Intensive farming is required to produce more and more. The consequence is that for a farmer to miss a crop or to have a crop means serious inconvenience and loss. Commercial fertilizers help to prevent just

such a catastrophe, by giving the young plants a start that enables them to be vigorous when the drouth and other summer enemies make their appearance.

O. C. York Co., Ont.

New Concrete Silo.

A new concrete silo of an interesting type has recently been erected in Wisconsin. The silo has a steel framework of slotted steel studding and metal lath, plastered on both sides with cement mortar, making hollow walls of concrete. No wooden forms were used. The steel frame reinforcement consists of galvanized steel studding or channels 2 1/2 inches wide, spaced 12 inches apart. These studs are made from steel hoops, and have an interlocking tongue cut out of the center of each upright piece of studding. This tongue is thrown out at right angles and attached to the next stud, forming a horizontal line of braces at intervals of every 17 inches in the height of the silo. Expanded metal lath is attached to the studs on both sides of the wall. A waterproofing compound was used on the cement plaster.

The steel framework was put up complete in three days; an additional day was required to put on the roof. The plastering was done in four days, and the silo was filled on the fifth day after its completion. The walls have a continuous hollow-wall air space, and the steel is galvanized to prevent corrosion; the cost is said to be only a little above the cost of a stave silo.

The ventilating facilities are operated from the ground on the outside of the silo by an ingenious device, and the structure is provided with the usual doors and entrance on the side and roof. The makers claim that the silo is quite indestructible, free from the danger of fire, and will always maintain a uniform temperature.

Usefulness of Birds.

The United States Department of Agriculture has just finished an extensive and complete study of the seventy varieties of birds found in California, to learn which ones were harmful and which beneficial. Out of them all only four species were found to be of doubtful utility when a careful study of the life habits and of the stomach contents was made. The more the food habits of birds are studied the more evident is the fact that the damage to agricultural products by birds is small compared with the benefits. In Canada we might make the one exception of the English sparrow, whose harmfulness is very evident at this season. Aside from this one species few birds are always and everywhere so destructive that their extermination can be urged on sound economic principles; some, like the swallows, swifts, wrens and chickadees are so strictly insectivorous that they are exceedingly beneficial, while others may injure crops at certain times of the year, but the loss is exceedingly small, and if by its insectivorous habits the bird prevents much greater destruction than it inflicts, the farmer should be glad to bear the lesser loss.

Notes from Essex.

Harvest is almost over in Essex. The wheat fields are again bare; threshing is now the order of the day. The yield is slightly above the average, i.e., from 25 to 45 bushels per acre; the quality is excellent. Barley is scarcely up to expectations. Oats are an extra good crop, both as to quantity and quality. The sample is much superior to last year. They matured rapidly, and ripened from seven to ten days earlier than they have for many years. Many farmers have finished cutting, and in several instances fields have been stored in the barn before the close of July. Should weather continue fine, harvest will be over before the end of second week in August. Carloads of fruit and vegetables are being shipped daily from different points in Southern Essex. Onions, tomatoes, cucumbers, etc., are reported as giving promise of an abundant harvest.

A. E.

In a trip through Elgin and South Oxford Counties, two weeks ago, along the Michigan Central, count was kept for some miles of the number of barns with and without silos. Fifteen with, and sixteen without, was the result. It was conspicuously noticeable that, with a very few exceptions, the silos accompanied the best barns, and stood on the thriftiest, best-tilled farms. Most of the barns without silos were small, old, and more or less dilapidated, while indifferent crops, dirty yards and wasting manure piles told the rest of the tale. Though the contrast is not always so marked, this story can be duplicated in almost any section where silos are to be found. Is not the deduction plain?

Pigpen Partitions.

Editor "The Farmer's Advocate":

In your issue of July 28th, ult., I find an inquiry re partitions for pigpens. I would prefer the wire; I consider it better in many ways. If you have a wide building with a goodly number of pens and light only from sides, by using wire you will have light in all the pens; with plank several of the pens would be dark. I think the objection your enquirer has to the wire becoming loose, the reason is the pigs get their snouts under and if posts are far apart they certainly will loosen it. This trouble can be guarded against in the following way: If floor is cement, put iron rods three-quarters of an inch thick and twenty inches long, having a head on one end and the other end having a screw with nut; put an iron plate or a cedar block on the end with the screw. Place a row of these about three feet apart, for big pigs, in line where you intend to have your partitions; place them so that they will be 1 1/2 inches higher than the floor when finished, or room between the head of rod and floor to fasten the wire partitions to with a piece of strong wire: if for young pigs, four to six feet will be close enough to put the rods apart. The end of the rod, with iron plate or cedar block, should be so put in floor on a firm place the required height, then place your stone on iron plate or cedar block, then finish with cement in the usual way. Now, if a plank floor, the wire partition can be fastened to the floor with an iron plate screwed to the floor, about the same distance apart as the rods. Now, if the floor is to be earth, put your wire partition eighteen to twenty-four inches below surface. With regard to old boars, they sometimes will get hooked by the tusk to the wire partition; saw off the tusks in the following manner: Get a good strong rope, with a noose on one end; put the noose on the upper jaw of the boar, draw the rope over a beam about six feet high; draw the boar close to the beam, almost lift him off his front feet; get a fine saw and saw the tusks off as close as you can to the jaw.

Carleton Co., Ont.

W. McA.

POULTRY.

Poultry Manure.

As is well known, when the poultry droppings accumulate under the roosts, and when they are left in barrels, there is a strong odor of ammonia noticeable. The development of such an odor is a sure sign that gaseous ammonia is escaping into the air, to be lost for the present. How to prevent such a loss is to prevent the development of the odor. Several chemicals of more or less fertilizing value in themselves may be added to the droppings from time to time, with good effect, both in stopping waste and in making the atmosphere of the henhouse more wholesome.

The best materials for this purpose are gypsum or land plaster, acid phosphate, and kainit, a cheap potash salt. Each of these chemicals has the power of forming new compounds with the ammonia as fast as it is set free from the original combination. Wood ashes and slaked lime should never be used, because they cannot combine with ammonia, while they do force it out of its compounds and take its place.

Plaster is apt to produce a dry, lumpy mixture when used in large enough quantities to arrest the ammonia, while kainit and acid phosphate produce the opposite effect of a moist, sticky mass.

In Bulletin 98 of the Maine Experiment Station is described an experiment in which sawdust was used, in addition to the chemicals. By this addition of an absorbent, the kainit and acid phosphate could then be used with excellent results.

Using their results as a basis for calculation, the weekly droppings of a flock of 25 hens, when scraped from the roosting platforms, should be mixed with about 8 pounds of kainit or acid phosphate and a half peck of sawdust. If one desires a balanced fertilizer for corn and other hoed crops, a mixture of equal parts of kainit and acid phosphate could be used instead of either alone.

Good dry meadow muck, or peat, would be equally as good as sawdust, if not better, to use as an absorbent.

In the experiment mentioned, more than half of the ammonia was lost in hen manure without chemicals, when compared with that which had been mixed with them.

Fresh poultry manure, at the present values of fertilizers, would be worth 60 cents per hundred pounds. Figures from different experiment stations would give the product of 25 hens for the winter season of six months at 375 pounds from the roost droppings only.

Poultry manure is especially adapted as a top-dressing for grass, because of its high content of nitrogen in the form of ammonia compounds, which are nearly as quick in their effect as nitrate of soda. A ton of manure preserved with sawdust and chemicals would be sufficient for an acre, when compared with a chemical formula for top-dressing.

On the same basis of comparison 100 fowls running at large on an acre should in a summer

season of six months, have added to its fertility the equivalent for at least 200 pounds of sulphate ammonia, 100 pounds of high-grade acid phosphate, and 60 pounds of kainit.

Crate-fattening of Chickens.

"The Farmer's Advocate," having learned that the subscriber to the following contribution makes a specialty of crate-fattening chickens, submitted the following questions to him, hoping to elicit information valuable to its readers.

1. How long have you been engaged in the business of crate-fattening chickens?
2. About how many chickens do you fatten in this way per year?
3. Where do you obtain the birds for fattening, what breeds are preferred, and what prices paid?
4. What length of time are they forced? Give details about rations, crating, etc. What are the average gains in weight?
5. What is the approximate selling price, cost of feed and other expenses?
6. Would you recommend farmers to undertake crate-fattening of their birds, or is this likely to prove profitable to them?

Editor "The Farmer's Advocate":

I will give you my experience with crate-fattening of chickens, and, if at any time I could meet with the Institute meeting, and demonstrate fattening and dressing and feeding, I would be glad to do so.

1. I have been fattening chickens for the past seven years. I started with 50 birds, and I expect to fatten 3,000 birds this year.
2. After the first year, I have fattened about 1,500 per year. This year I expect to fatten 3,000.
3. I buy all kinds of poultry from the farmers, and select the chickens that are suitable for fattening, and sell the rest to different firms in Toronto. I consider the Rocks very hard to beat, although I fatten all the heavy breeds, such as Orpingtons, Wyandottes, Rocks, and crosses with the above breeds. The prices run from 6 to 8 cents per pound, and crate-fattened chicks from 10 to 12 cents per pound. There is a number of farmers that are fattening the chicks, and I buy them from them. I believe I am the only one that pays an advance price for fattened birds.
4. I make crates the same as the Government experiment stations use—8 feet long, with 4 pens 2 feet long, 16 inches wide, and 26 inches high. I select the birds as to sizes, and put four birds in each pen. Before putting them in, I give them a good dusting with sulphur. I starve the bird for 24 hours before starting to feed, and I give them just what they will eat up clean in about five minutes, or a little longer. If any is left, I clean out the troughs and turn them over. I feed three times a day the first week, and twice a day after that. If the birds have been properly fed, and have had a balanced ration, they will be fattened in from three to four weeks. If birds are not fat in four weeks, if properly fed, it will usually pay best to ship them and take what you can get for them. The ration that has given good satisfaction with me is $\frac{1}{4}$ corn, $\frac{1}{4}$ barley, $\frac{1}{4}$ buckwheat, $\frac{1}{4}$ low-grade flour. I mix it with whey, skim milk or buttermilk. I make the mixture just so it will pour out of a pail. In very warm weather I give them a drink of water in the middle of the day, but when it gets cool they do not need it. I add a little salt, as it makes the feed more palatable. They will gain from one and a half to three pounds per chick. I also give them all the grit they will eat twice a week. The average gain for the whole season (1,500 birds) is about two pounds each. I can get best results from birds weighing four to five pounds each, and the cost is about 13 cents each for the season. The grain costs about \$1.45 per cwt. The feathers will nearly pay for dressing. We dress all our birds, they are oiled at the mouth, and feathers taken off. I have shipped to one firm in Montreal my whole output each year.
5. I get them dressed for 2 cents each. My building is 22 feet by 82 feet, and will accommodate 800 birds. A very valuable asset is the manure. I had over 150 bushels of clear droppings in one year.
6. I consider it will pay anyone to fatten their chickens, as there is not much danger of overdoing the market. The time is here when the people are beginning to want the best. There is nothing that hurts the market more than to flood it with a poor article, and it is the same way with the poultry business. As to profits, take a bird at 4 pounds, at 8 cents per pound, makes 32 cents—the cost alive. The same bird, fattened to 6 pounds, at 12 cents per pound, gives 72 cents. You have a profit of 40 cents per bird, less feed. It is not difficult to fatten chicks; anyone can do it who will attend to the work and feed regularly. One of the most important points is not to overfeed the first week. Just give them what they will eat up quick and want a little more, but don't give it to them. It will pay the farmers better to fatten chickens than it pays to fatten hogs. It is difficult, in the small towns, to get

the people started to pay an extra price for the No. 1 article, but when they do, nothing else will do but the best. I have a number of local customers that want no other chicks but crate-fattened ones.

D. BURCH.

Norfolk Co., Ont.

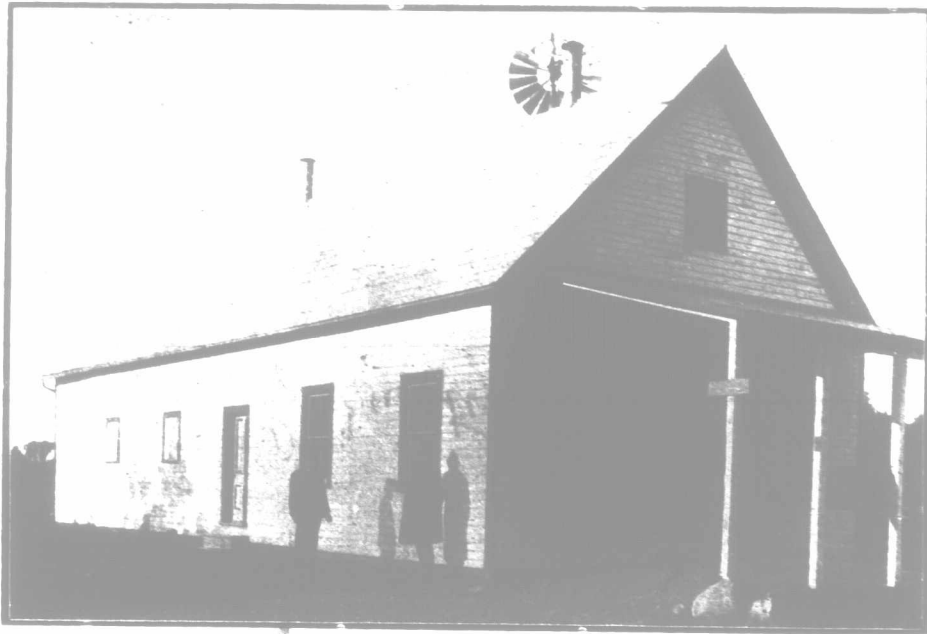
[Note.—We have omitted part of Mr. Burch's answer to question five. However, it may be said that the profits each year, as given in this letter, are very attractive, and justify his statements in reply to question six. We will welcome specific contributions from others, relating their experience with crate-fattening.—Editor.]

THE DAIRY.

"Aberdeen" Cheese Factory.

One of the best, if not the very best, cheese factories in the Brockville section is the Aberdeen, belonging to Jas. A. Ferguson, of Caintown, Leeds Co., Ontario. While this is an old factory, the building was rebuilt four years ago, so that a modern, up-to-date factory is here found. In its construction, the essentials of successful cheese-making were carefully considered. The factory is equipped with a cool-curing room, built at the same time as the factory, and constructed according to the blue-prints and specifications furnished by Commissioner Ruddick. This room is 20 x 30 feet; is supplied with double windows and shutters; the ice-room is about one-third the size of the cooling-room. The floor of the cooling-room is cement, and rack accommodation is supplied for about 250 regular-sized cheese. The make-room has a wooden floor, and the entire interior of this room is painted.

This factory was visited between five and six o'clock on Tuesday, July 19th, a hot, bright day, yet the temperature of the cooling room was 58 degrees F. There were fourteen cheese in the



Aberdeen Cheese Factory.

Owner and maker, James A. Ferguson, Caintown, Leeds Co., Ont. A pattern of factory to follow after.

hoops, and one hundred and thirty cheese in the cool-curing room, indicating one of the advantages of having such a plant, viz., that cheese do not have to be rushed to market as soon as made. The cheese were pronounced by Inspector Puhlow to be of excellent quality, firm, well finished, smooth and close.

A windmill is used at this factory for pumping purposes. A tile drain carries all sewage well away from the vicinity of the factory. A steel whey tank is used, and the whey is pasteurized, being a temperature of 140 degrees at the time of visiting the factory. The surroundings are desirable, the vicinity being quite high, well drained, and everything is quite as clean and inoffensive as at most homes.

Patrons of this factory take better care of their milk than the average. Water-cooling is general, covered stands are frequent.

Mr. Ferguson is maker, as well as owner, and, as is to be expected where such a type of factory is found, and such patrons are, he takes a care of his culture and of his making that is producing an excellent product.

Contrasts in Milk Records.

Some records are always stimulating. Some of the records from members of the cow-testing associations for May are indicative of good cows well kept and well fed, in a word, decidedly profitable cows. For instance, one dairyman in Western Ontario, owning a herd of 62 cows, had the inspiring record of 1,127 pounds of milk per cow during the month. Again, in two associations in Peterboro and Oxford Counties, the average of 14 of 380 cows was 1,957 pounds of milk, and 317 pounds fat.

The reverse of the picture is not so rosy, indicating the need of more and better cows. Several associations have an average of under 700 pounds of milk and 26 pounds fat. A group of 75 cows at one creamery gave only 604 pounds of milk and 21.8 pounds fat in May. Think of the difference! The average yield noted above is seventy per cent. better.

As an instance of what is being done by the selected animal, the record of one of the most famous cows to-day forms a wonderful contrast. She is credited with 120 pounds fat in 30 days. This cow, it is said, was picked up from a neighbor who did not keep records, and, therefore, was unaware of her phenomenal value. Who will be the next man to discover another such diamond in the rough? Individual cow records alone can show where such jewels exist. C. F. W.

Testing the Cows.

Is it worth while to test my cows? It does not cost anything, but will it pay for the bother and time? Many men are finding it is worth while, that it pays to find out whether the cows are eating more than they are worth, and wasting one's time taking care of them. In truth, they are wondering how they ever made it pay, when they did not test their milkers. One progressive farmer, who thought he had a paying herd of cows last year, found out that the heaviest milker in full flow in June only gave 1,057 pounds of milk, the rest running much below that. He found only two cows out of the fifteen testing as high as three per cent., and one as low as two per cent. Was it worth his while to test that herd? Undoubtedly. That winter he sold every one of them, and, in replacing them, he got the kind that paid as they went along.

Mr. Whitley, who has charge of the cow-testing work of the Dominion Department of Agriculture, is finding many such cases.

Last year, in July, 7,700 cows were tested for 730 men. This year there will be 1,500 cows more than last year. There is an astonishing number of cows giving milk that tests less than two per cent. An excellent plan is now adopted which should cause a great increase in cow-testing. This plan allows the cheese or butter maker to buy the complete testing outfit, and gives him charge of the testing in his locality, the Department paying him a fair remuneration each month. Factory owners should encourage their makers to co-operate with this plan.

The Department will supply to any man, for the asking, a very neat record book for his herd, so arranged that the record

for the year for each cow is contained on a single page. The number of pounds of milk, the value of the milk, the per cent. of fat, and the cost of feed, are so arranged that the profit or loss is seen at a glance. Every man who milks cows should have one of these record books, and make use of it.

There is small argument to defend the position of the man who does not believe in testing and keeping record of what his cows are doing.

Double Cream Cheese.

Take any quantity of cream testing 22% fat, the cream may be either sweet or slightly sour (3 to 4 of acid). Add rennet at the rate of 5 drs. to every 100 lbs. of cream; do not use a larger proportion of rennet, as the cheese when finished are liable to have a strong rennet flavor, which is not desirable. Add the rennet when the cream is at a temperature of 60° to 65° F.

In about four hours the coagulation will be firm enough, depending on whether the cream has been previously pasteurized or not. If pasteurized a longer time will be necessary for the coagulation, the addition of culture will also be available.

When coagulated pour into dry cloths placed over bowls, and hang up to drain in a cool, drafty place. Cloths should be of close duck and dry. It is advisable not to put too much cream cloth, as it will be liable to develop too much acidity before draining is completed.

A few hours later open out and scrape down the sides to help of draining; hang up again, and repeat this scraping at intervals till the cheese is

firm enough to mould. The draining can be hurried on by scraping down more often.

When the cheese are ready to mould the cream should be of a stiff pastry consistency, but not sticky. Salt is now added, at the rate of 1 oz. of salt to every 4 lbs. of cheese. Sprinkle the salt over the cheese, and work in with a knife or spatula.

The cheese are now ready to mould. Line the tins with wax butter paper and press the cheese in with a knife or spatula; when full, fold over the ends and shake out of the mould.

When cheese are finished they should be kept in a refrigerator or cold storage.

FRANK G. RICE.

[Note.—In "The Farmer's Advocate" of March 24th appeared a short article noting the manufacture of four kinds of soft cream cheese in the Dairy Department of the Ontario Agricultural College, the work being in the hands of Frank G. Rice, a graduate of the Midland Agricultural and Dairy College, England, who had been at Guelph since a year ago February. A regular and steadily developing demand for these cheeses had been worked up in Toronto. We understand that during the hot weather some difficulty has been found in keeping the cheese, and consequently the orders have fallen off of late. It may be found necessary to use some sort of preservation to keep these soft cheese during hot weather. In accordance with our promise to publish details at a convenient opportunity, we herewith publish a description of making double cream cheese.—Editor.]

Cleanliness Amongst Creamery Patrons.

A large degree of the success of the Canadian dairy industry must depend upon the patrons—the men who produce the milk upon the farm. Certainly it is worth while to do our utmost to make it a success, and not to be always grumbling and finding fault.

Care must always be exercised. Do your utmost to keep your cream sweet, for the best results are obtained thereby. Keep your cream test from 33% to 35%, for when it is down to 20% and 25% there is by far too much milk left in the cream, and this, of course, causes it to sour more quickly than it otherwise would.

It is very disagreeable to the buttermaker to have the cream so sour that it can scarcely be turned out of the cans, or when it does go it is liable to splash over everything. Sweet cream tests higher than sour, so that it is to the patron's own interest to take proper care of it.

In the first place, keep your milk pails and your separators clean, and free from all dirt. It is just as easy to keep them clean and sweet by well washing them as to only half wash them and allow them to become filthy. I have had pails handed to me to milk in that looked as though they had been washed once a month instead of twice a day, as they should be. So it is with regard to washing separators. Some think it is too much bother, and takes too much time to wash them twice a day, as should be done, for you cannot keep them clean unless you do. Just try the new way and see if it is not better.

The moment we are through milking we commence separating, and as soon as all is separated the cream is taken away and set in a tub of cold water, and there left until well cooled down; then it is taken to the cellar and left there until the cream hauler calls for it.

Never pour the warm cream in with the cold, but cool down before mixing.

Wash your separator as soon as possible after using it, as it will be much easier washed, and there is then no chance for any of the impurities to dry on. After thoroughly washing, scald it well. Do not leave any drops of milk around on the floor, but clean everything thoroughly, for does the old adage not stand true under all circumstances, that "What is worth doing is worth doing well?"

There was rather a peculiar incident happened in one of the factories of our land recently. One lady had a pail of cream which was tainted and unfit to send to the factory, but at the last moment she managed to thrust it upon the cream-hauler, and he failed to take a sample. Of course this was mixed with other cream, and when it was churned the butter was of an inferior quality. Now, that butter had to be sold at a reduction, and caused a loss of several dollars to the factory, whereas if she had kept it at home and churned it, it would have only meant a few cents loss to her. And what is a few cents to one's pocket?

SUBSCRIBER'S DAUGHTER.

How to... On...

Cheese vs. Butter.

In a combined cheese and butter factory, what factors should be considered in figuring whether to make butter or whole-milk cheese? How would you figure comparative profits under present market values, say June 7th?

This topic was discussed lately in the New York Produce Review by four members of its Butter-makers' Discussion Club. H. Weston Parry, of Oxford Co., Ont., answers as follows:

The chief factor to be considered is necessarily the wish of a majority of the patrons. With no great difference between the relative values of butter and cheese, local conditions are most likely to play the most important part in determining which to make. A combined cheese and butter factory usually calculates to make cheese from May 15th to October 15th, and butter the rest of the time. It is not always a question of which pays best, but frequently a mere automatic continuation of the custom of past years. However, it by no means should be considered that most important factors are absent, which tend to make the manufacture of either butter or cheese to be the more profitable at any given time. As a general thing, prices for these products vary in a more or less constant degree. Butter is invariably cheapest in June, and so is cheese. On the other hand, both butter and cheese prices are wont to bear a similar relation one to the other throughout the summer months. Lately, owing to increased home consumption, butter has had the advantage in this country, as far as prices are concerned. Naturally, in a cheese district there will be a majority of patrons whose herds have been built up with the special purpose of cheese production, and their influence is felt when the question of cheese or butter manufacture is mooted. Again, the increasing scarcity of cattle of every description is bringing buttermaking into favor in many a district which formerly saw nothing but cheese.

With butter at 21½ cents on June 7th, and cheese at 10½ cents, we find the patron receives about 78 cents per 100 pounds for his milk from butter, and 80 cents per 100 pounds from cheese, figuring 4½ pounds butter to the hundred of milk, and 9½ pounds of cheese, and 3 cents a pound the cost of making the butter, and 1½ cents the cost of making the cheese, including milk-hauling in both cases. On this basis, the 2 cents in favor of the cheese is wiped out by the buttermilk, and, in view of the high price of stock and hogs, there can be no doubt but that the skim milk is worth nearly double what the whey is for hog-feeding, and a good deal more than three times as much for raising calves and young stock. Figuring whey as being worth 12½ cents per hundred, this gives butter the advantage of 10 to 25 cents for every 100 pounds whole milk, allowing for 80 pounds of both skim milk and whey.

Commenting upon the several answers, the editors of the Review state that the question is one which must be worked out independently in each individual case, and summarize the following factors, not necessarily in order of importance:

1. Relative values of butter and cheese. This ratio varies within rather narrow limits from month to month during the year. It is impossible to lay down as a general rule just what relation between values of these two commodities represents equilibrium. This will depend to some extent upon relative yields secured; i. e., the overrun in buttermaking, and the loss of solids and amount of moisture successfully incorporated in the cheese. Here the skill of the maker plays a very important part; also the requirements of the market catered to. Usually, the relative yields are figured as 1 pound butter to 2.2 pounds cheese, from the same milk. It is not always practical to follow closely every change in the balance of values as one or the other commodity is favored. In cheesemaking, the product is not marketed as promptly as butter (though, unfortunately, the difference seems to be constantly growing less), and by the time goods reach the market, conditions may be reversed. Further, we must consider the value of an established outlet. When the product is marketed through wholesale channels it is often possible to secure for it a somewhat higher average price if shipments are made regularly than when irregular shipments are sent. By frequent changes from butter to cheese, this advantage might be lost.

2. Ability to turn out high-grade products. The skill of the maker, as well as the condition of the raw material, must be considered here. It is doubtless true that, to reach top values on cheese, a better average raw material is required than to top the butter market.

3. Relative cost of manufacturing and materials. This will vary considerably with different localities, and must be figured independently for each individual case.

4. Cost of transportation and marketing of product. This may be an important factor in the problem. Net values, freight and commission charges deducted, should always be taken as a basis for comparison.

5. Manner of disposing of by-products. It is safe to estimate the value of skim milk and buttermilk at twice the value of whey, under same conditions and treatment, when returned to the

farms and properly fed. The value of these by-products when so returned will, of course, depend upon the use made of them, and, from the manufacturer's point of view, one might imagine conditions so deplorable that, in choosing between butter and cheese, no allowance would have to be made for the difference in feeding value of the by-products returned to the farmers. From the patron's standpoint, however, this factor should not be overlooked, if he gets back his share of the skim milk or whey. If the skim milk is used in the manufacture of cheese, or a part skim cheese and butter are made, it is sometimes possible for such a plant to compete successfully with a cheese factory, even though under other conditions prices naturally favor cheese.

6. Supply of raw material. It often happens, when a certain amount of gathered cream is received at a combined plant, that the factory would lose more through loss of patrons by a change from buttermaking to cheesemaking than would be gained even when cheese values were proportionately higher. Again, even in a plant receiving all whole milk, the average fat content of the milk will exert some influence. As a general proposition, the higher the average fat content of the milk, the greater the profit in the manufacture of butter and a skim or part skim cheese.

7. Method of buying milk. This might be a factor in a proprietary factory, when milk for cheesemaking is purchased by bulk at a price based on some other factory, as is the case in many factories in New York State, but milk for butter-making paid for according to test. The price it is necessary to pay for the cheese milk would enter into the calculations.

8. Wish of majority of patrons. This, under certain conditions, is a factor to be considered, as Mr. Parry points out; but, while it may sometimes be a controlling factor, it may often be an illogical one.

In considering the discussion presented by the Editor of the New York Produce Review, it must be borne in mind that the making of a skim cheese or a part skim cheese is not feasible, it having been tried by various factories, and abandoned as unprofitable. The law requires all such cheese to be branded, and consumers do not take kindly to the product.

Throwing further light upon this question, the situation existing at the Kerwood Cheese and Butter Factory, of Kerwood, Middlesex Co., Ont., is substantially as follows:

Three and a half cents per pound is charged for making butter from milk or cream delivered at the factory. Where drawers are engaged, and a hauling route established, it costs, on an average, about ten cents per hundred to draw the milk and return the skim milk, and, on an average, about thirty-five cents per hundred pounds to draw the cream, of which amount the patrons pay eight cents, and the operator the balance. The three and a half cents for making covers all charges for salesman, secretary, and all other expenses. The buttermilk is also sold, and the proceeds divided amongst the patrons.

For making cheese, two and three-eighths cents per pound is charged, this paying for drawing the milk and all other expenses. Whey butter is made, for which the patrons receive two cents per hundred pounds milk. The balance of the proceeds from whey butter is the charge for making.

As to which pays the farmer best, the results for June last are presented. One patron divided his milk, putting half into butter and half into cheese. He received for that put into butter 79.90 cents per hundred, less 8 cents for hauling, leaving 71.90 net. For milk put into cheese, he received 75.6 cents, plus 2 cents for whey butter, making 77.6 cents net per hundred pounds. Had he delivered the milk to the factory himself, he would have received for butter 79.90 cents, for cheese 85.5 cents, per hundred pounds.

In each case the milk was paid for by test, testing 3.4 per cent.

From the milk put into butter he received skimmed milk; from that put into cheese he received skimmed whey.

It is seen that for the Kerwood factory conditions differ from those of Mr. Parry's district. Buttermilk is sold, not returned; both butter and cheese cost more to make than with him. The cheese patron received for June 5.70 cents a hundred more for his milk, and, on the other hand, received skimmed whey, instead of skimmed milk, from the factory. In direct money returns, the cheese business paid the most. But skimmed whey can have but a small feeding value, while sweet skimmed milk will range upwards of fifteen cents per hundred, depending on the prices of other feeds. Under conditions existing in this particular factory for June, if the butter patrons were prepared to get the best use of the skim milk, their total net returns would apparently exceed those of the cheese patrons. The skill of the maker will always be an influencing factor, but in either case the value of a skillful maker ought to be about equally profitable.

There is this fact, however, to be considered, that if a community is equipped for one line of making, the difference in returns will scarcely warrant the change in plant. Rather will it pay to improve the product in the line already established.

GARDEN & ORCHARD.

Fall Treatment of the Orchard.

Clean cultivation of the orchard has proven itself a valuable practice to the great majority of orchardists, and is being more and more practiced in the orchards of the general farmer, as well as in those of the professional. Wherever it is practiced it will be found advantageous at this time of year to seed the land down to a good growing cover crop. The fruit in the orchard is now approaching its mature size, and, consequently, does not require as much of the moisture and nourishment as it did earlier in the season, so that the sowing of a crop will tend to divert the excess of water and of plant food from the fruit to the growing crop. This crop should be allowed to grow as late as it will into the fall, and in the spring be plowed under. Its presence will serve as a protection against frost during the winter. In the spring it must be plowed under early and thoroughly. With a rapid growing crop, such as rye, this may not be an easy thing to do. Besides serving as a protection during the winter, this crop by being plowed under in the spring adds greatly to the humus of the soil, thus making it of a more desirable texture, and greatly adding to its moisture-retaining capacity and its fertility. The presence of the crop during the late summer and fall prevents the growth of the late varieties of noxious weeds in the orchard, and gives to it a cleaner appearance.

There are several crops that serve very well for this purpose, the chief of which are winter oats, rye, rape, peas, hairy vetch and clover. On general principles the legumes are preferable, but few of them make sufficient growth to warrant their use, consequently the cereals wheat or rye are commonly used. Rape and vetch are both hardy, and will give good growth, while the clovers and peas must be sown very early to give satisfactory growth.

The treatment must be much the same as for a regular crop. Put the land in a good condition of tilth, then harrow and roll after sowing. The seeding, however, should be thicker than usual to insure a thick matted growth of the crop before cold weather sets in.

The Vegetable Crop.

In the central district of Ontario (from Oshawa to Berlin and Brantford) the prospects for an early tomato crop are good; early potatoes are fairly good, while the late crop is only medium. Onions are badly blighted, and the bulbs are small. The celery crop is later than last year in this district, but promises well. Cabbages, cauliflowers, corn and beans all promise well. In the southern section (centering around Hamilton to Ojibwa) the tomato crop is fairly good. The dry weather has affected the potato, onion, cabbage and cauliflower crop; the acreage of the latter two are a little less than last year. Celery is very poor; melons are a failure at Ojibwa; corn has suffered much at Tecumseh for want of rain. In the western division prospects for a tomato crop are good; the early potatoes have been poor, but late ones promise fair; onions are a fair crop; celery is doing well; late cabbage and cauliflower promise quite good. In Eastern Ontario, tomatoes are about a two-thirds crop about Ottawa, while from Belleville to Picton they are good. Late potatoes promise well; onions are only fair, blighting some; celery is late, but fairly good; late cabbage and cauliflower promises quite good. The general outlook in the Ottawa section is for a vegetable crop much below the average.

Notes on the Fruit Crop.

The various reports on the apple crop reaching this office continue to confirm previous reports. The Nova Scotia apple crop is bound to be much below the average, frost having done much damage at blooming time. Many orchards have only the early varieties, while few if any show a full crop. The early varieties may turn out about one-fourth of a crop, while later varieties may turn out a half or slightly better. There is always the hope that things may not be as bad as they seem.

The United States crop is considerably below normal, according to the official Government report, though a large apple operator of New York, whose opinion the Fruit Trade Journal respects, has it that the New England crop is larger than last year. New York State is reported to have a full crop of Baldwins, which is the chief apple of the State. Virginia, Pennsylvania and Ohio are reported to have an abundance. The Middle West, however, is undoubtedly short. The Coast regions anticipate a splendid crop, probably the largest crop yet harvested there.

British Fruit Crop.

The Canadian Trade Commissioner at Glasgow sends the following report on the fruit crop in Great Britain, taken from an English journal—

A well-known fruit salesman who has been visiting the fruit-growing areas of England, says he found the apples to a considerable degree ruined, and there was no hope of anything more than half the usual supply. The pear trees were even worse affected, and the growers confessed that they would be satisfied if they were able to get in a quarter of the usual crop of sound pears.

The cherry orchards were destroyed, and the cold and the rain had made most of the strawberries unsuitable for table purposes. As regards plums and greengages, both crops were hard hit, but whilst the quality of the fruit would not be so good as usual, there was the prospect of a limited crop, which would bring enhanced prices.

The best quality gooseberries are in short supply, and are bringing about double the normal price. The best table strawberries, of which the supply is limited, and cherries worth eating, were being sold at all sorts of fancy prices.

APIARY.

The Honey Crop.

At a recent meeting of the Honey Exchange Committee of the Ontario Beekeepers' Association, reports were received from four hundred and fifty points throughout the Province, representing 23,582 hives of bees, an increase of sixty per cent. over last year. All parts of the Province were well represented.

Practically no old honey is left on the market, and the prices recommended by the committee, according to the reports, were realized. The average production per colony of light honey this year is 58.3 pounds, as compared with 59.1 last year. The crop in the central and western part of the Province is lower than last year, but the much larger crop in the eastern counties maintains the average.

After considering the reports carefully the Committee recommended the following prices for this year:—

No. 1 light extracted (wholesale), 10 to 11 cents per pound.

No. 1 light extracted (retail), 12½ to 15 cents per pound.

No. 1 comb (wholesale), \$1.80 to \$2.25 per dozen.

No. 2 comb (wholesale), \$1.50 to \$1.75 per dozen.

In view of the decrease in the crop and the firm prices of fruit, it is believed the above prices should be realized, and it is suggested that beekeepers hold a part of their honey for later delivery.

Wintering Bees Out of Doors.

Editor "The Farmer's Advocate":

I have a slight knowledge of beekeeping, but have never seen them wintered indoors. First, would it be possible to winter bees on their summer stands in Cumberland County, and if so, what extra protection would they need? Second, as this is quite a windy location, would it be advisable to place the hives in a half-acre lot of second-growth spruce, etc.? The lot is fenced in, and within a reasonable distance from the house, so that would not be any objection in tending the bees during the busy season.

Cumberland Co., N.S. HONEY BEES.

During several visits in connection with lectures in beekeeping, from what I can glean it would not be desirable to winter bees in your section outdoors. It may, of course, be possible to do so, and if the attempt is made they should be put into the best possible condition for winter; that means, the colony should have a good laying queen. The combs should not be pollen clogged by having been queenless for a long time during the working season; if such is the case, such combs should be removed from the center of the brood chamber. The bees should have no more combs than they can well cover during warm spells in autumn, and the colony should be fed twenty to twenty-five pounds of sugar syrup, say in late October; this syrup to be made of two parts by measure granulated sugar and one of water; bring the water to a boil, then stir in the sugar until dissolved. I mention the feeding of sugar syrup as winter stores because beekeepers in Nova Scotia and New Brunswick complain that bees get much wild-aster honey late in the fall, and this is generally not considered good food for bees when long confined, as in winter, to the hive. The single-walled hive should be put in outer packing, with say six inches of packing (forest leaves are excellent) below and at the sides of the hive, and ten to twelve inches at the top. The entrance of the hive should be left open, say four inches, and to prevent the entrance from clogging with dead bees, a clean-cut half-inch board can be bored in the front of the hive, an inch or two from

regular entrance. To allow the bees to get out of their hive through the packing, a bridge can be put on the alighting board of the hive, and extending to the inner wall of the outer case, wide enough and high enough not to allow the packing to clog the above entrances to the hive. An entrance, say three inches wide and half-inch deep, should be cut in the outer case to allow the bees to fly favorable days. Remove the propolized or sealed quilt from above the frames and put on a clean cloth. This will allow moisture from the bees to pass up and through the twelve inches of leaves above. There should be an air space between the leaves and the roof of the packing box, with small holes at the side or end of the box close to the roof. This arrangement allows enough air to circulate over the packing to keep that space dry. The half-acre lot of spruce might afford the shelter from wind so desirable, and bees put up as above described should have the best possible chance of wintering. If you have a good cellar and have been fairly successful in wintering in that way, I should advise trying the outside method on a small scale.

R. F. HOLTERMANN.

THE FARM BULLETIN

U. S. National Good Roads Convention.

An important road convention was held in the City of Niagara Falls, N. Y., on July 28th, 29th and 30th, when the National Good Roads Congress of the United States held its third annual meeting. Among the prominent delegates and speakers present were Senator Martin Dodge, formerly Director of the Office of Road Inquiries at Washington, D. C.; Congressman William F. Sulzer, of New York; Congressman J. S. Simmons, of New York; and Norman E. Mack, Chairman of the National Democratic Committee. A number of Canadians were present, of whom were Reeve Thos. Kennedy, of Toronto Township; W. G. Trethewey, Toronto; W. A. McLean, Engineer of Highways for Ontario; Controller J. J. Ward, of Toronto; Mayor Rudd and Ald. Mahoney, Guelph; and Mayor James Sheppard, of Queenston.

The convention was called to order by A. C. Jackson, president of the association, followed by prayer by Rev. A. S. Bacon, of the First Presbyterian Church, after which Mayor Douglas, of Niagara Falls, N. Y., extended an official welcome.

The first address was that of Congressman W. F. Sulzer, of New York, whose remarks, with respect to the importance of good roads, were particularly forceful. He said, in part:

"The plain people of the land are familiar with the truths of history. They know the past. They realize that often the difference between good roads and bad roads is the difference between profit and loss. Good roads have a money value far beyond our ordinary conception. Bad roads constitute our greatest drawbacks to internal development and material progress. Good roads mean prosperous farmers; bad roads mean abandoned farms, sparsely-settled country districts and congested populated cities, where the poor are destined to become poorer. Good roads mean more cultivated farms and cheaper food products for the toilers in the towns; bad roads mean poor transportation, lack of communication, high prices for the necessities of life, the loss of untold millions of wealth, and idle workmen seeking employment. Good roads will help those who cultivate the soil and feed the multitude, and whatever aids the producers and farmers of our country will increase our wealth and benefit all the people. We cannot destroy our farms without final decay. They are to-day the heart of our national life and the chief source of our material greatness. Tear down every edifice in our cities and labor will rebuild them, but abandon the farms and our cities will disappear forever, and pestilence will decimate the land.

"If you say good roads will only help the farmers, I deny it. The farmers who produce the necessities of life are less dependent than the millions and millions of people who live in our cities. The most superficial investigation of the subject will clearly prove that good roads are just as important to the consumers, if not more so, than they are to the producers of the country.

The burdens of life fall hardest on the farmer. The best the Government can do for him is to help him get decent highways. I am with the farmer in this fight for good roads. I am with the rural districts of our land in their struggle for better transportation facilities, and in Congress or out of Congress I shall do all in my power to hasten the consummation they desire—the ability to go and come along decent roads, without exhausting the time and effort, and the utility of man and beast. I know the farmer's joys and sorrows, his trials and his troubles, and I know how much we owe to the farmers of our country. A debt we can never repay. The establishment of good roads would in a great measure solve the problem of the high price of the necessities of life, and the consequent cost of living, which is be-

ginning to make life a struggle for existence. By reducing the cost of transportation, it would enable the farmer to market his produce at a lower price, and at a larger profit at the same time. It would bring communities closer and in touch with the centers of population, thereby facilitating the commerce of ideas, as well as of material products.

Congressman Simmons referred to the vast expenditures, past and proposed, on waterways of the United States. While favorable to such national undertakings, he would say, unhesitatingly, that if the Government had to choose between such a project and road construction, he would stand unalterably in favor of road improvement.

B. F. Yoakum, chairman of the executive committee of the Frisco Lines Railway System, was the principal speaker on Thursday afternoon, and from his railway experience, pointed out the great waste which is annually accruing to the United States from bad roads. He pointed out that, with a good road, a farmer who lives fifteen miles from a shipping station is better off than one who lives five miles away with a poor road. The man with a good road, with the distance against him, can make his trips quicker, and can carry from two to three times as much on his wagon; and, more important, he can depend upon the road and bridges every day in the year; while the man who encounters impassable roads often loses his best market, and his vegetables decay upon his hands. One of the most important tasks of public officials is to give to the farmers roads from their farms to the railroad station in keeping with the railroads from the railroad stations to the markets.

At Friday morning's session the first speaker was J. Hampton Rich, representing North Carolina, who referred to the good work done by the split-log drag in parts of the South where stone roads cannot be built.

Senator Dodge, at the afternoon session of Friday, detailed in part the history of the good-roads movement in the United States, in which work his own energies have been so largely expended. The speaker said, in part:

"The composite nature of our Government makes it difficult for us to apportion the burden so that it shall bear justly on all, but not too heavily upon any. There are three great interests which ought to bear a portion of the cost of building and maintaining public highways: the local interest, the state interest, and the national interest. If the cost of construction should be divided equally between these three, it would correspond to the composite nature of our Government, and also would bear equitably upon the financial resources of all the interests concerned.

"It is not proposed to revive the policy which prevailed when the national road was built, because that involved a change of jurisdiction from the State and local authority to the national authority. This is undesirable, and would probably be inequitable. But the proposition is to extend the principle of State aid so as to include national aid to the extent of one-third, or possibly leave the jurisdiction undisturbed, as it is, in the hands of the State and local authorities. The aid given by the general Government should be of a contributory nature, only available, however, on condition that the States or civil subdivisions therein should initiate all proceedings. The matter of construction and expenditure of the money should remain, as now, with the State or local authorities, and the supremacy of the State in its legal jurisdiction should be upheld and remain."

The next speaker was a Canadian, W. A. McLean, Director of the Ontario Roads Improvements, who, in his opening remarks, urged the importance of roads as the public avenues leading to and from "the homes of the people," and upon which their comfort and welfare so greatly depended. The advent of automobile traffic was referred to, and the hope expressed that it would ultimately become one of the best friends the farmer has ever had. To meet this new mode of traffic, a cheap, dustless and durable road surface is becoming an imperative necessity, and it is one of the difficult problems engineers have to face. Creating much through traffic on main highways, it becomes unfair that local municipalities alone should maintain such roads, and hence a new reason for State and Provincial aid.

Roads, in times past, were largely built by the Caesars and Napoleons for military purposes, and today it is significant that captains of industry are aiding in the good-roads movement. In a few months, on Niagara's historic ground, representatives of the two countries will gather to celebrate the "Century of Peace" existing between Canada and the United States. Would not good roads, permitting a free social intercourse between all nations, be a factor in preserving that peace, tending to military disarmament, "the parliament of the world?"

W. J. Trethewey, representing the Toronto Board of Trade, said that he believed the rural district around Toronto would have the best system of roads in America within three years. He expressed the opinion that the automobile would be the farmers' greatest boon, and that all roads will be carried in this manner within the next decade.

On Friday evening a series of stereopticon views was shown by a representative of the Office of Road Inquiry at Washington, and the congress concluded its work on Saturday.

Our Scottish Letter.

At the moment of writing the main interest is the reported outbreak of foot-and-mouth disease in the West Riding of Yorkshire. This great county is as large in area as the whole of Scotland. It is divided into three sections, known as Ridings. The West Riding embraces the City of Leeds, where the annual show of the Yorkshire Agricultural Society is being held this week. What effect the outbreak may have on the show remains to be seen, but it is most unfortunate for all concerned that it should have occurred just now. Happily, the Board of Agriculture and Fisheries have acted with commendable promptitude, and the whole of the affected and in-contact animals have been slaughtered, while a cordon has been drawn around the infected area, and no movement out of or into it will be permitted until all risk of contagion is at an end. The same policy is being pursued as proved so successful in connection with the Edinburgh outbreak a couple of years ago, and doubtless the disease will spread no further. But we are not done with the matter when that is said. The cause of these outbreaks is disquieting. No one seems to know whence they come, and there is urgent need for an exhaustive inquiry into all possible sources of contagion. At a conference of the Scottish Chamber of Agriculture, held recently in Aberdeen, one speaker suggested, with reference to the apparently sporadic character of cases of anthrax, that the scattering of dissolved bones of uncertain antecedents all over our fields was not a very rational proceeding. It might very well be the cause of these mysterious outbreaks of disease which baffle the investigator. A more foolish suggestion has not infrequently been put forward, and it might be worth the while of our Government officials to look into these things, with a determination to exhaust the problem if they do not solve it.

BRITISH SUMMER SHOWS.

It is some time since I wrote to "The Farmer's Advocate" over the usual signature, but in view of the number of communications relative to Clydesdale matters, the Scottish letter will not have been missed. The three great exhibitions at Olympia, London; the Royal Showyard, Liverpool, and the Highland and Agricultural Society's Showyard at Dumfries, have been held. The first, as a horse show, does not count for much. No doubt it has its uses, and as a "Society" function it greatly interests many leisured people in the Metropolis. But for the ordinary farmer it means little. This year it proved the keenness of horsemen, like Judge Moore, of New York, to have the best, and their determination to pay almost any price for an animal which hits their fancy. The choicest harness horse still commands as high a price as ever, but the misfit harness horse is wholly out of it. Nobody wants him, and up to this date no one has discovered how to breed the tops without obtaining more of the misfits than anyone wants. I fear the breeding of harness horses will never again be a profitable pursuit for the farmers of this country.

The Royal Agricultural Society's meeting at Liverpool was one of the best ever held, but both it and the Highland Society's meeting at Dumfries were marred by stormy, wet, unseasonable weather. The feature of the Liverpool gathering was the phenomenal show of Shorthorns, and the feature of the Highland the very fine show of big, weighty, well-bred Clydesdales. The judging of the Shorthorns at Liverpool occupied the judges all day from nine to five, and never once did interest flag. The quality of the exhibits was exceptionally high, and the championships were worthily bestowed. King Christian of Denmark, the sire of the champion bull, was a beautiful bull, and Earl Manvers had all the credit in the world by breeding and bringing out such a superb bull as the Royal champion. Lord Middleton, Birdsall, York, is a spirited patron of British agriculture, and one of the most successful breeders of Shorthorn cattle and Shire horses in these islands. He sold a fine dark roan two-year-old bull, named Birdsall Croesus, to go to Buenos Aires, at 1,050 gs. This was the highest price realized at the sale in the showyard. The show of Clydesdale mares at the Royal was excellent, but the stallions made only a moderate exhibit. It was otherwise at the Highland, where probably was seen an exhibit of the breed which has never been excelled. There were several notable features in the show. Of the four horses in the final for the male championship, three were bred in Aberdeenshire, and two were by Everlasting (11331), one of the most successful of the sons of Baron's Pride. He was himself unbeaten in the showyards, taking first prizes as a yearling, two-year-old and three-year-old. His stock are characterized by unusual weight and substance. They are big horses, and both the first-prize yearling and the first-prize two-year-old colts at the Highland were Aberdeenshire bred and got by him. The

sensational horse of the show was, no doubt, the first-prize three-year-old stallion, Baron Ashvale (14579). He was bred by Messrs. G. & J. Cocker, Hills of Petty, Fyvie, Aberdeenshire, and was got by Rozelle, a well-bred son of Baron's Pride, out of an Aberdeen prize mare, named Lady Ashvale, by Hiawatha. Baron Ashvale was never before in a show-ring. He is a singularly handsome and extra big horse, with capital hind action, and his fore legs planted rightly below him. He moves very gaily, and on parade instantly commands attention. His supremacy was not called in question by anyone. The first aged stallion was Scotland Yet (14839), a four-year-old horse of immense size and strength, the son of Royal Favorite (10630), and the celebrated champion mare, Chester Princess, which a few weeks ago died mysteriously and suddenly on a Saturday, after having been at Stirling show on the previous day. Scotland Yet is owned by Mr. T. Purdie-Somerville, Sandilands, Lanark. Baron Ashvale and Royal Guest (15363), the first-prize two-year-old, and champion at the Royal, by Messrs. A. & W. Montgomery, Kirkcudbright, and the first-prize yearling by Mr. James Kilpatrick, Craigie Mains, Kilmarnock.

The female Clydesdales at the Royal and the Highland shows were championed by the beautiful four-year-old mare, Boquhan Lady Peggie. She was bred and is owned by Mr. Stephen Mitchell, of Boquhan, Stirling. She was not at the Royal, as there was no class for yeld mares there, but at the Highland she beat every one of the best that were at the Royal. Her success at the Highland was popular to a degree. She is one of the most evenly-moulded and truest Clydesdales exhibited for many a day. Her sire was Hiawatha, and her dam, Lady Peggie, was a notable prize mare, by Baron's Pride. She won both the Cawdor cup and the President's medal, and she and all the other females competing for the Cawdor cup were examined and passed as sound by a bench of the best veterinary surgeons in Scotland. The first-prize brood mare, Blossom of Newhouse, and the first-prize three-year-old mare, Thelma II., were all owned by Mr. Stephen Mitchell. Both of these last-named are daughters of Baron's Pride, and big, grandly-colored mares at that. Moira, the first-prize two-year-old, is another of his daughters. She is owned by her breeder, Mr. John Sleigh, St. John's Wells, Fyvie, and last year was Cawdor-cup winner. Mr. Sleigh also bred Thelma II. and the second-prize yearling, Elaine, and all three are full sisters. The first-prize yearling was Mr. William Dunlop's unbeaten Dunure Myrene, by Baron of Buchlyvie. This is a filly about which experts were jubilant.

Clydesdale men are having a good time, and even the croakers must this year admit that the breed is improving. We have a much larger number of bigger and better horses and mares than used to be the case. A gentleman, who has followed the Clydesdale cult for about forty years, says he can remember an individual horse in the past as good as any we have now, but for one such to be found then there are now easily to be found ten. A notable fact is the position taken by Aberdeenshire. This is entirely due to the class of sires hired during the past 30 years for service in that county by the Horse-breeding Associations.

ELEGANT BUSINESS AYRSHIRES.

Ayrshires are sharing in the boom in British live stock now being experienced. It is long since an Ayrshire dairy cow was seen to equal this year's champion, Lady Mary Stuart! For her £300 have been offered and refused. Her breeder, Mr. John Murray, Carston, Ochiltree, has bred many good cows, some of them the very best in the history of the Ayrshire breed. But never at any time did he breed a better than Lady Mary Stuart. I understand the probable destination of the £300 offer was Canada.

The Milk-record scheme has done very much to advance the popularity of Scots dairy breed. The movement is extending, and the determination only to breed from cows with proved and attested records of milk yield is becoming general. The day may not yet be in sight when the showing standard will, in the case of a dairy breed, be regarded as incomplete, and the Milk-record Test be demanded as an element in the case, but we are rapidly hastening to this consummation. Profit is everything in agriculture now. Fancy must go to the wall, and the cow which possesses constitution and is a proved profitable milker, will invariably be promoted to first place.

HONOR TO DISTINGUISHED MEN.

Recently we have been paying high honors to distinguished stockmen. Within the past four years Scotsmen have subscribed to have the portraits painted by first-class artists of Mr. A. M. Gordon, of Newton, one of the most successful of Aberdeenshire breeders of Shorthorns; Mr. Wm. Duthie, Collynie, the Prince of Shorthorn breeders, and without any doubt one of the biggest men in Scotland to-day; Mr. David Riddell, the veteran breeder and owner of Clydesdales; and now, within the past fortnight, we have been presenting Mr. William Montgomery, Banks, Kirkcudbright, with portraits of himself and his esteemed

partner in life. We had a big night of it in Kirkcudbright Town Hall, and Canadian friends were well represented by Mr. Robert Ness, Howick, Quebec, and Mr. Robert Sinton, from the Northwest. More than twenty years have passed since a similar honor was paid to Mr. Andrew Montgomery, and we take it as something unique among stockmen that two brothers, members of the one firm, should have been honored in this way. Canada was not slow to join in the tribute to Mr. William Montgomery, who is one of the most popular of Scottish stockmen, and a business man with whom it is always a pleasure to have a deal. Another prominent Scottish stockman who has lately been honored is Mr. William Howie, the noted tenant of Burnhouses, Galston, and a very successful breeder of Ayrshires, as was his father before him in the same farm, and his brother, Mr. James House, at Hillhouse, Kilmarnock. Mr. Wm. Howie has removed to the farm of Carwadrock, near to Pollokshaw, in the vicinity of Glasgow. He is a good farmer, as well as breeder of Ayrshire cattle.

"SCOTLAND YET."

Technical Training for Fishermen and Farmers.

The Royal Commission on Technical Education, in its tour through Nova Scotia has already unearthed a body of opinion justifying its existence, and giving promise of results that will liberate new forces in the educational history of Canada. At points like Yarmouth there was unanimity of opinion in favor not only of technically-trained operatives in the manufacturing establishments, but serious complaints of the imperfect education of the youth in the common rudiments of school knowledge. Clerks were reported to be sadly deficient in the three R's, and unable to write as well as those of 25 years ago. It was pointed out that the old apprentice system now failed to accomplish what was needed. Both at Yarmouth and Liverpool there were calls for special training in methods of curing fish and for marine schools as part of the regular school system, where shipmasters, mates and second mates could be properly qualified, encouraging young men to continue in the Canadian service instead of going to the United States to learn and engage in seafaring. Among the special needs of the fishing industry was mentioned the training of young men in the mechanism and management of gasoline power boats which have come into use, entirely altering old conditions. Wireless telegraphy and improved methods in fish culture should be applied also. Existing marine schools under private enterprise were reported inefficient. Valuable evidence on these subjects was given by A. W. Hendry, ship builder and owner, and M. H. Nickerson, M.P.P. Stanley A. Starratt, President of the Summer School of Science, and others, gave testimony to the value of that institution. How well it is appreciated is shown by the presence of some 200 teachers, at a cost of about \$30 each for the term, voluntarily assumed to improve their own efficiency. In one case it was reported that municipal authorities had discontinued manual training and domestic science in a city school, though the pupils themselves had strongly petitioned for their continuance.

Prof. W. W. Andrews, of Mount Allison University, spoke in high appreciation of the valuable research work being done at experiment stations and agricultural colleges, but added with force that young people of the farm required special training in order that this knowledge could be applied with skill. The men who grow crops should be trained from the beginning, and since agriculture was the country's greatest industry, the work of the schools should have positive relation to it. This position was further sustained by the evidence of Prof. S. McIntosh, of Dalhousie University, and testimony in support of manual training and domestic science was given by a number of gentlemen and lady teachers.

Dr. Robertson, the chairman, and other members of the Commission, are expressing themselves as delighted with many features of Maritime schools visited and the cordial receptions everywhere accorded them, and the earnest and prompt efforts on the part of municipal and educational authorities to lay evidence before them.

Death of Andrew Gunn.

Andrew Gunn, president of the packing and produce firm, Gunns, Limited, died very suddenly August 1st, of heart failure. He was born about fifty-two years ago at Beaverton, Ont., where he lived for some time, later moving to Woodville. Twenty-three years ago he became junior partner of Gunn, Flavell & Co., of Toronto, which firm later became Gunns, Limited. The late Mr. Gunn was also vice-president of the firm of Gunn, Langlois & Co., Limited, of Montreal. He has been a very active and capable business man, and he will be much missed, not only in the immediate circles of trade in which he moved, but throughout the Dominion, as he was widely known, personally or by reputation, and his name was synonymous with business rectitude.

Canada's Revenue for the First Four Months of the Fiscal Year.

According to dispatches, for the first four months of the present fiscal year, Canada's revenue shows an increase of \$5,625,148 over the corresponding period of last year. For the same period, the expenditure on revenue account increased by \$1,258,651, while the capital expenditure decreased by \$631,884, leaving a net betterment of over five millions.

For the four months, the total revenue has been \$35,655,439, the customs receipts totalling \$23,005,748, or \$5,087,918 better than last year. The expenditure on the consolidated fund account has been \$22,044,077, and on capital account \$5,797,337. The excess of receipts over the total expenditure has been \$7,804,025. Indications point to a surplus this year of revenue over all ordinary expenditure, even larger than last year's record surplus of \$22,000,000. For the month of July the revenue totalled \$9,320,586, an increase of \$883,148 over July of last year. Expenditure on consolidated fund account increased by \$1,242,290, and on capital account by \$232,380. The net public debt of the Dominion at the end of the month was \$328,615,687.

Middlesex County Standing Field Crop Competition.

The judge has finished his task of arranging in order of merit the entries in the standing field-crop competition for Middlesex County, and the report for "oats" is here given: First, R. R. Cameron, Ailsa Craig, on Banner oats, scoring 82½ points; second, Chas. Bean, Brinsley, on Siberian oats, scoring 80 points; third, Hughes Bros., Falkirk, on Abundance oats, scoring 78½; fourth, Gilbert Grieve, Dumfries, on Wyatt oats, scoring 77; fifth, Thos. Hindmarsh, Ailsa Craig, on Banner oats, scoring 72. Highly commended—Ross Bros., Nairn, on Banner oats, scoring 70½. Commended—D. McArthur, Ailsa Craig on Banner oats, scoring 64 points. The winners here have made a splendid showing, and should, if possible, enter the sheaf and the two-bushel-sack competition noted elsewhere in this issue. "The Farmer's Advocate" takes an especial interest in the result of this contest at her own doors, since the winners of the first six places prove to be regular paid-up subscribers to this paper. Doubtless, the skill and ability of these farmers has placed them at the head of the competition, but is there not some ground for feeling that the efforts of "The Farmer's Advocate" have been weighed in the balances, and not found wanting.

Apple-growing in Ontario.

At the International Apple-growers' convention, recently held at Niagara Falls, N. Y., Professor Crow, of the Ontario Agricultural College, speaking of the industry in Ontario, stated that for about fifteen years the industry has been steadily declining, and that while recently there is a revival of the business in some sections, yet too generally it is still on the decline. Most orchards are small, and the good growers are few and far between. There has been a general decrease in the quantity of good apples finding their way to market, and an increase in defective ones.

What Mr. Crow has said is in the main true. During the last fifteen years, or even more, there has not been much tree setting until lately. The old orchards have been getting older, and some have died, while there have been no new ones coming on to replace them. Pests and diseases have been getting more numerous, without the corresponding zeal in combating them. But of late there are signs of a renewed interest in this feature of husbandry. With the improving markets and market facilities there is good reason to hope for a new and greater development in this business.

Graduate School of Agriculture Closes.

The fourth session of the Graduate School of Agriculture, which has been in progress for the past four weeks at the Iowa State College, at Ames, was brought to a close July 29th.

The session was entirely successful from the standpoint of numbers enrolled and character of the lectures given. The total enrollment was 207. In this number, 39 States, the District of Columbia, and six foreign countries, were represented. This enrollment showed nearly 43 per cent. increase over the previous session, in 1908. The number of States represented is very significant of the fact that the American Agricultural Colleges, as a whole, are coming to realize the benefit of the sessions of the Graduate School to their instructional and experimental staffs, and to American agriculture at large.

The faculty was composed of experts from the United States Department of Agriculture, Agricultural Colleges of the United States and Canada, Biological Departments of several Universities, the Carnegie Institution at Washington, and from two foreign countries. Dr. J. C. Ewart, of the University of Edinburgh, delivered five lectures on "Animal Breeding," and Dr. Von Tschermak, of the Royal Imperial Agricultural College of Austria, delivered five lectures on "Plant Breeding."

Discussions of the latest theories and investigations relating to agricultural development were interesting and very resultful. Men in attendance at this session of the Graduate School have become better acquainted with and have a broader knowledge of the progress of agricultural investigation than ever before.

Dominion Fruit Crop Report for July.

The Weather.—Continued dry weather in Ontario and Quebec during the last week of June and the fore part of July shortened the strawberry crop. The drought affected other small fruits to some extent, particularly raspberries, but heavy showers later in the month improved conditions greatly, though rain came too late to prevent a heavy drop in apples.

The weather in the Maritime Provinces has been rather wet this month, with alternate hot and cold spells.

The weather in British Columbia has been very hot and dry. The need of rain has caused a heavy drop in plums.

Apples.—There has been an additional falling-off in the apple prospects in July in Eastern Ontario. In Southern Ontario early apples are making a fair crop, but winter varieties will be lighter than



The World's Milk-record Cow, 418' Missouri's Chief Josephine. Owned by Miss M. Agricultural College. Record, 17,008.8 pounds milk in 182 days.

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usual. All along the north shore of Lake Ontario, on account of the drouth, the "drop" has been very heavy. The same is true in Eastern Ontario, though a fair crop of Fameuse, McIntosh and Alexander will be harvested. Winter apples are a failure in Perth, Wellington, Waterloo and Simcoe. Apples have fallen badly in South-Western Quebec, and the crop will be below the average. In New Brunswick the crop will be rather light, and there is no improvement for the apple crop in Nova Scotia. In the Annapolis, Cornwallis and Gaspereau Valleys the crop will be very light. In Hants and Eastern King's the prospect is better; along the South Mountain there is prospect for half a crop. It is probable that the apple export from Nova Scotia will be less than half of last season. British Columbia will have a large crop of both early and late apples.

Pears.—In the Niagara district and the Georgian Bay district these are a fair crop. Elsewhere in Ontario the crop is light to medium, as is also the case in Nova Scotia. British Columbia will have a good crop, especially of Bartlett's.

Plums.—Plums are lighter than usual in Ontario, being a light to medium crop, and unevenly characterizes the yield. British Columbia will have a large crop, especially of Bradshaw and Italian prunes, though the sample may be small, on account of the hot weather.

Peaches.—Peaches will be a good crop in the Niagara district, though not quite as heavy as last season. Apricots and early peaches are a good crop in British Columbia.

Grapes.—The vineyards are looking healthy in the Niagara district. Young vineyards are well loaded, but in the old ones the crop will be less than last year. Red grapes, in many sections, are a full crop.

Destructive Insects and Pests Act.

The following additional regulation, under the above Act, was ordered by His Excellency the Governor-in-Council, at Ottawa, on July 27th, 1910, in virtue of the provisions of Section 3 of the Act.

Section 131.—All nursery stock originating in Japan, or in any of the States of Vermont, New Hampshire, Maine, Massachusetts, Connecticut and Rhode Island—six of the United States of America—shall, after fumigation, be subject to inspection, as provided by Section 6 of these regulations.

- This regulation has been issued to prevent: 1. The introduction of the Brown-tail and Gipsy moths from those States in which they have been found and are spreading. 2. The introduction of injurious insects from Japan.

In certain of the New England States nurseries are, in regions, seriously infested with the Brown-tail and Gipsy moths, and this inspection, in addition to fumigation for San Jose scale, is necessary to insure the absence of nests of the Brown-tailed moth or egg masses of the Gipsy moth, both of which have been found on New England nursery stock.

Already a number of injurious insects have been found on Japanese stock, and the introduction and establishment of some of these might prove to be as serious as the introduction of the San Jose scale from the East. A number of insects occurring in Japan, including the apple and pear borers (Layena herellera Dup., and Nephopteryx rubizonella Rag.), have established themselves on the Pacific coast, and other have been found which might readily do so.

Prince Edward County, Ont., which has been constructing a number of excellent macadamized main roads in the past few years, proposes to prosecute still further the work of improvement. A Provincial Order-in-Council has been put through, authorizing the county to expend \$50,000 additional, one-third of which will be contributed by the Province.

GOSSIP.

Volume 71, of the American Shorthorn Herdbook, has been issued from the press and a copy has, by courtesy of the Secretary and editor, John W. Groves, Chicago, Ill., been received at this office. The volume contains 655 pages, and the pedigrees of bulls numbering from 307001 to 316000, and of females from 4 001 to 50000, a total of 19,998 entries.

HACKNEYS FOR SALE.

Those interested in obtaining some well-bred Hackneys, will find the lot offered elsewhere in this issue by Gill & Askin, of Cooksville, Ontario, a very attractive group. These are all home bred, every one of them having been raised under Mr. Assin's own supervision, and from one excellent foundation mare. They are from such excellent sires as Warwick Model, Robin's Duplex, and Spirit Rockell. They have never been

pampered, worked nor shown, and are now being offered for the first time to the public. This is an attractive opportunity, and the man who wishes to make a good beginning should make careful inquiry regarding this stock.

J. F. Mitchell, Burlington, Ont., sending a change of advertisement, mentions the following sales of Shorthorns since March 1st, which has been the best demand for bulls they have had in years: To W. S. Besweith-riek, Bender, Sask., one good yearling Cruickshank Orange Blossom bull, from imported sire and dam; to Purves Thomson, Purves, Man., Broadmind (imp.), an extra good Broadhooks bull of show-yard type; to J. A. Caldwell, Gilchrist, Ont., the good imported bull, Newton Ideal, half-brother to our herd bull, Bandsman, and to Bandmaster, first at the Royal Show, England; to Skinner Bros., Rutherford, Ont., the imported Roan Lady bull, Favourite Character, a very promising herd-header;

to Albert Purves, Craigvale, Ont., Imp. Redstart, our stock bull for the past two years; he has proved himself an extra sire, his get winning at Toronto; to Michael Clarke, Jockvale, Ont., one good yearling bull; to the Megantic Agricultural Society, Campbell's Corners, Que., three deep-bodied, heavy-boned bulls, all by Lord Roseberry (imp.); to Peter Smart, Vesta, Ont., a thick bull calf, by Redstart; to G. L. Jarvis, Paris, Ont., Beauty's Ideal, a very stylish bull calf; to Jas. Manderville, Tyrrell, Ont., Roan Roseberry, a good thick yearling bull, by Lord Roseberry (imp.); to T. E. Post, Postville, Ont., Dalmeny Ruler, a nice red yearling bull, by Redstart. Have 15 nice bull calves coming on for the winter trade.

N. Dymont, breeder of Ayrshire cattle, whose address has heretofore been Clappison's Corners, Ont., has had it changed to Rural Route No. 2, Hamilton, Ont., and writes regarding the milk-production

of some of his cows. Fless Morton has given 9,000 lbs. in 6 months; Nellie Gray, 50 lbs. per day for five months; Queenie, milk-test winner, 50 lbs. per day; Beauty, winner in milk test with second calf, in eight months has given nearly 1,000 lbs. more than necessary to qualify in Record of Performance. These all have bull calves, sired by Milk Record (imp.), which should prove sires of Record-of-Performance cows.

Most of the benchlike political noise in this country is due to an attempt of the fools to educate the wise men.

MARKETS.

British Cattle Markets. London.—Canadian cattle quoted steady, at 14c. to 15c. per lb. Liverpool.—Canadian steers, from 14c. to 14½c., and cullin bullocks, from 12½c. to 13½c. per lb.

Enumeration of Census Values.

The farm and urban values of the census of 1911 will be enumerated under the date of 1st June. They will include the real-estate and live-stock values of each enumeration district at that date; of the live stock and nursery stock sold in 1910; of the dairy products consumed at home, sent to the factories, or sold, and of the animals slaughtered on the farm in the same year, together with value of other products of the farm.

Land and buildings, and farm implements and machinery owned by every person in the enumeration district, will be recorded separately for values in 1911, and the rent of land and buildings will also be recorded if leased in that year. Values will be taken for orchard fruits, small fruits and vegetables, separately, for 1910; but values of horses, milch cows, other horned or meat cattle, sheep, swine, poultry and hives of bees will be taken separately for 1911, at the date of the census.

The values of live stock and nursery stock sold in 1910 will include horses, milch cows, other horned or meat cattle, sheep, swine, poultry, and hives of bees; and of nursery stock, which means fruit and ornamental trees grown for transplanting into orchards, gardens and parks.

Dairy products consumed on the farm, and sent to factories or sold, refer to products of the year 1910. They include the values of milk, cream, homemade butter, and homemade cheese.

Animals slaughtered on the farm in 1910 will be recorded for the values of horned or meat cattle, sheep, swine and poultry. Horses are not included in these values, as in our country their meats are not used for food.

The values of other products of the farm include those of eggs, honey and wax for 1910; and wool, maple sugar and maple syrup for 1911.

The enumeration of hired labor on the farm refers to the year 1910. It will give the total number of weeks of labor employed, which means the number for all men who work for hire on the farm, and the total amount paid for hire, including allowance for board. The payment should be reckoned for the full time of service, and should include the value of board. The inquiry relating to earnings for domestic service is asked for in Schedule No. 1.

In addition to the foregoing inquiries of values, a question is asked for the value of all lands and buildings not manufacturing establishments, or mines owned in Canada in 1911, which are outside of the enumerator's district.

ARCHIBALD BLUE.

Breed-study Contest.

The contest is growing. Thirty-three replies were received, coming from Nova Scotia, New Brunswick, Quebec and Ontario. Let us have a hundred replies in response to the query appearing this week. Out of the thirty-three replies received this week, none were correct, though the reasons were good, and some of the guesses were close. Sixteen put the horse as a Hackney, seven a French Coach, six a German Coach, one a Morgan, one a Saddle, one a Cleveland Bay, and one a Thoroughbred.

The picture was that of Carmon 32917, a registered Standard-bred (or American Trotter) horse. The picture was taken when he was 12 years old. This horse is now at the head of the Government Breeding Stud, located at the Colorado Experiment Station, in which work the United States Government is seeking to evolve, by judicious mating and selection, an American heavy-harness type of horse from the blood represented in the American Trotter and Saddle horse breeds.

Carmon has had quite a career as a heavy-harness show horse, himself being one of the lead horses in Sir Thomas Lawson's four-in-hand team, once famous in American Heavy-harness Horse Shows. He was then known as Glorious Thundercloud. In type, he is not of the Standard-bred road-

ster conformation, but is of a type found in the roadster breed, and which the United States Government wish to establish and perpetuate. There is much reason for guessing him as belonging to one of the Coach breeds; however, his lightness of barrel and fineness of bone are earmarks of the breed to which he belongs, that do not usually appear in the Hackney or Coach breeds.

THE NEXT ONE.

This week we offer you the picture of a pure-bred cow, and assure our contestants that she is thoroughly typical of the breed to which she belongs; so, if you do not recognize the breed, get busy with your books. As hinted, there is a one-dollar book for the first and best correct answer reaching us, but reasons for the answer, as well as the correctness and the earliness of its arrival here, are considered. We cannot consider answers which reach us after noon, Monday, August 22nd, at which time this week's contest is closed.

How Tuberculosis is Introduced Among Cows.

A Wisconsin dairy herd of 46 head, all appearing healthy, were sold to divide the interest of landlord and tenant, says Dr. H. L. Russell, Dean of Wisconsin College of Agriculture, the former retaining 18 head of what he thought the most valuable animals, and then buying three. The herd was dispersed to twelve persons, eleven of whom thus introduced tuberculosis into their herds, for thirty-two of these cows were found to be infected, the tuberculin tests being given by State Veterinarian E. D. Roberts. Some of these animals showed any outward appearance of the disease, and no one suspected its presence at the time of the sale. The post-mortem examinations showed it had made only slight headway. However, it had begun to spread in the five months following the sale. Its accidental discovery was most timely to prevent the spread of infection from the twelve centers.

And this is the story of how it happens right along. We didn't have tuberculosis a generation ago, because we were not buying from the outside. We have been seeding the disease by the interchange of stock. In the early stages it was spread by the pure-bred stuff. One herd had spread tuberculosis to sixteen other herds in four States. One man lost \$3,000. The public auction has been a still more potent factor than private sales in thus spreading death and destruction, until now our grade herds are in worse condition than pure-bred cattle.

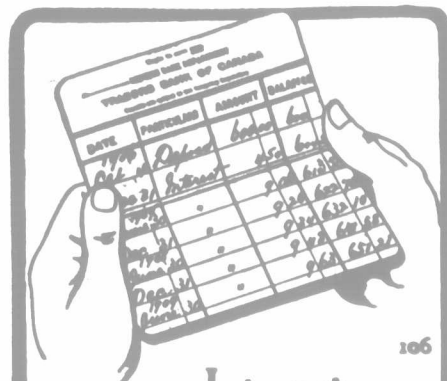
Out of 363 diseased herds found in Wisconsin tests, 263 herds, or more than 72 per cent., had acquired the disease by purchase. What more positive proof could one want of the spread of tuberculosis through the interchange of animals from herd to herd?

When a man buys a tuberculous animal, he could better afford to take it out and knock it on the head than to take it into his herd and let it spread the disease.

The practical lesson growing out of the knowledge is, never buy cattle to take into a herd unless they are subjected to the tuberculin test.

Good Crops in New Ontario.

Reports from agents on the line of the Temiskaming and Northern Ontario Railway announce that the farmers of the Liskowad district will have a good harvest this year. The hay crop is very large. For the first time in the history of the district hay will be shipped out instead of being imported. Similar favorable reports of the hay, grain and vegetable crops in the Finghart and Charlton districts have also been received.



Interest Accumulates

every hour, day and night, on your deposits in the Savings Bank Department of the Traders Bank. In time the interest amounts to as much as the original savings, thus doubling your saving power.

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THE TRADERS BANK OF CANADA

Over 100 Branches in Canada

Toronto.
LIVE STOCK.

Receipts at the Union Stock-yards on Monday morning, August 8th, amounted to 139 cars, containing 2,928 cattle, 242 calves, and 83 hogs.

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	128	152	280
Cattle	1,193	2,495	3,688
Hogs	2,224	1,754	3,978
Sheep	2,028	909	2,937
Calves	493	161	654
Horses	—	79	79

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

	City.	Union.	Total.
Cars	168	186	354
Cattle	2,663	3,299	5,962
Hogs	2,629	628	3,257
Sheep	2,385	879	3,264
Calves	447	170	617
Horses	2	108	110

Receipts for last week were much less at both markets, than for the previous week, but prices remained about the same for cattle, calves, and milkers and springers, while sheep and lambs, as well as hogs, were cheaper, especially the latter.

Exporters.—Demand good all week, and several large shipments were made. Steers sold from \$5.75 to \$6.80, export bulls, \$5 to \$5.75; heifers, \$6.10 to \$6.20.

Butchers.—Prime packed lots, \$6.25 to \$6.50, only one small lot bringing the latter price all week, loads of good, \$5.75 to \$6; medium, \$5.25 to \$5.50 and \$5.60; common, \$4.75 to \$5.50, and light cattle sold at \$4.50; cows, \$3 to \$4.75, and a few extra quality, \$5.

Feeders.—Rice & Whaley, who have a branch in Winnipeg had four carloads of Northwest feeders on the market on Tuesday, which sold as follows: One load feeders, 1,080 lbs. each, \$5.10, one load feeders, 950 lbs. each, \$4.85, one load feeders, 898 lbs. each, \$4.60, one load feeders, 768 lbs. each, \$4.

Milkers and Springers.—Moderate receipts of milkers and springers sold at \$45 to \$65 for the bulk. One choice Holstein springer sold at \$85.

Veal Calves.—There was a strong market for veal calves, the quality of which was good, as a rule, sold from \$6 to \$7.75.

Sheep and Lambs.—A fair supply of sheep and lambs were on sale. Sheep—Ewes sold at \$1 to \$4.25, and a few at \$4.50 per cwt.; rams and cull ewes, \$3 to \$3.50 per cwt. Lambs sold at easier quotations as a rule, ranging from \$6 to \$6.75 per cwt., which is still high, in comparison with foreign markets.

Hogs.—The market for hogs opened lower on Monday, at \$9.35 for selects, fed and watered, and \$9, to the drover, for hogs, f. o. b. cars at country points.

Horses.—Owing to the railway strike, receipts of horses were light. The local demand was a little stronger at the Union Horse Exchange, and prices were very firm for the best heavy drafters. One superior quality drafter, weighing over 1,700 lbs., sold for \$300. Manager Smith reports this class of horses as being scarce, and high in price; horses 1,600 lbs. and over are still going to keep up in price, Manager Smith stated to your correspondent; and he also stated that he was going to keep as many of this class as possible in his stables, so that dealers could readily be supplied without having to scour the country. The general run of horses were unchanged in prices.

BREADSTUFFS.

Wheat.—No. 2 Ontario old winter, \$1.06 to \$1.08; new crop, 95c. to \$1, outside. Manitoba wheat—No. 1 northern, \$1.09; No. 2 northern, \$1.064, track, lake ports. Rye—No. 2, 68c. Peas—No. 2, 70c. to 71c., outside. Buckwheat—No. 2, 51c., outside. Barley—No. 2, 52c. to 53c.; No. 3X, 50c. to 51c.; No. 3, 45c. to 47c., outside. Oats—Canadian Western, No. 2, 42c.; No. 3, 41c., at lake ports; Ontario, No. 2, 39c. to 40c., outside. Corn—American No. 2 yellow, 734c. to 74c.; No. 3 yellow, 724c. to 73c., Toronto freights. Flour—Ontario winter wheat patents, \$4.10 to \$4.20, in buyers' bags, outside; new winter-wheat flour for future delivery, \$3.85 to \$3.90, is quoted. Manitoba flour—Price at Toronto: First patents, \$6.20; second patents, \$5.70; strong bakers', \$5.80.

HAY AND MILLFEED.

Hay.—Baled, in car lots, on track, Toronto, No. 1, new, \$13 to \$15; No. 2, \$12.
Straw.—Baled, in car lots, \$7 to \$7.50, on track, Toronto.
Bran.—Manitoba bran, \$20 per ton; shorts, \$22, track, Toronto; Ontario bran, \$20, in bags, shorts, \$150 to \$2 per ton more, on track, Toronto.

COUNTRY PRODUCE.

Butter.—Receipts equal to demand, with prices steady. Creamery pound rolls, 24c. to 25c.; creamery solids, 23c. to 24c.; separator dairy, 21c. to 22c.; store lots, 19c. to 20c.

Eggs.—Supplies large enough for all demands, with prices easy, at 20c.

Beans.—Dealers report stocks low and market firm. Primes, \$2 to \$2.10, hand-picked, \$2.15 to \$2.25 per bushel.

Cheese.—Market steady. Large, 114c. to 12c., and 124c. for twins.

Potatoes.—Small lots of new from gardeners sell at 75c. to \$1 per bushel; car lots of American sell at \$2.25 to \$2.50 per barrel, on track, Toronto.

Poultry.—Receipts light. Spring chickens alive, in crates, 16c. per lb.; spring ducks, plentiful, by the crate, 10c. per lb.; hens alive, 13c. per lb.; turkeys alive, 15c. per lb.; chickens dressed, 20c. per lb.; ducks, 14c.; hens, 15c. per lb.; turkeys, 18c. per lb.

HIDES AND WOOL.

E. T. Carter & Co., 85 East Front street, have been paying the following prices: No. 1 inspected steers and cows, 91c.; No. 2 inspected steers and cows, 84c.; No. 3 inspected steers, cows and bulls, 74c.; country hides, 8c. to \$4; calf skins, 11c. to 13c.; horse hides, No. 1, \$2.75; horse hair, per lb., 30c.; tallow, per lb., 5c. to 64c.; lamb skins, 30c. to 35c. each; wool, unwashed, 13c. to 14c.; wool, washed, 18c. to 20c.; wool, greasy, 15c.

FRUITS AND VEGETABLES.

There was a plentiful supply of both foreign and Canadian fruits last week, at following prices for Ontario grown:

Apples, 27c. for basket; blueberries, basket, \$1 to \$1.25; cherries, basket, \$1 to \$1.25; currants, black, basket, \$1.25 to \$1.50; red currants, basket, 50c. to 65c.; gooseberries, crate, 75c.; Lawton berries, quart box, 11c. to 13c.; peaches, Ontario grown, basket, 50c.; pears, basket, 35c.; raspberries, box, 12c. to 15c.; tomatoes, basket, \$1.50; beans, basket, 20c. to 25c.; beets, per dozen, 20c. to 25c.; cabbage, crate, \$1.25 to \$1.50; carrots, dozen, 40c.; celery, bunch, 50c.; cucumbers, basket, 65c. to 75c.; eggplant, basket, \$1 to \$1.25; green peas, basket, 30c. to 40c.; onions, Spanish, crate, \$2.75; peppers, green, basket, 40c. to 50c.; squash, green, \$1 to \$1.25; watermelons, 35c. to 45c. each.

Montreal.

Live Stock.—Exports of cattle from the port of Montreal for the week ending July 30th, amounted to 3,342 head, against 2,619 the previous week. In the local cattle market there was a stronger tone for steers, and sales took place at an advance. Choicest sold at 64c. to 64c. per lb., fine at around 6c., good at 54c. to 54c. per lb., medium at 5c. to 54c., and common at 4c. to 5c. Good to choice bulls or cows sold at 3c. to 5c. per lb. There was also a good demand for small meats, but supplies were fairly liberal, the result being that prices held steady, at 34c. to 34c. per lb. for sheep, best, while culls sold at 3c. to 34c. per lb. Lambs sold at \$3.50 to \$5.25 each, while calves ranged all the way from \$3.50 to \$12 each, according to size and quality. Hogs held about steady, selling at 104c. per lb., weighed off cars, for selects, mixed lots selling at 94c. to 10c. per lb.

Horses.—This is a pretty dull time of year, there being no special activity in any one line for which horses are required. Prices have been, accordingly, steady, as follows: Heavy draft horses, weighing from 1,500 to 1,700 lbs., \$275 to \$350 each; light draft, weighing from 1,400 to 1,500 lbs., \$225 to \$275 each; light horses, 1,000 to 1,100 lbs., \$100 to \$175 each; inferior animals, \$50 to \$100 each, and fine saddle or carriage animals, \$350 to \$500 each.

Dressed Hogs and Provisions.—The demand for abattoir fresh-killed stock continues active, and prices continue firm. Sales were made last week at 144c. to 144c. per lb., for selects. Demand for all lines of provisions seems good, and prices are firm. Hams, extra large sizes, weighing from 25 lbs. upwards, 17c. per lb.; large sizes, 18 to 25 lbs., 18c.; select weights, 13 to 18 lbs., 20c.; extra small, 10 to 13 lbs., 21c. per lb.; bone out, rolled, 19c. to 21c. per lb. Breakfast bacon, English boneless, selected, 204c. per lb.; thick breakfast, 20c.; Windsor skinned backs, 22c.; spiced rolls, short, 18c.; Wiltshire bacon, 19c. per lb. Barrelled pork sold at \$26.50 to \$31 per barrel, and beef at \$18 per barrel. Lard compound sold at 124c. to 14c. per lb., pure lard having sold at 154c. to 164c.

Potatoes.—All the old stock was not off the market, and no more American potatoes were arriving. Receipts have been entirely from surrounding sections, and now that the G. T. R. strike is settled, these are apt to increase considerably. They were quoted at \$2 to \$2.25 per barrel, and at about half that price per bag of 80 to 85 lbs.

Eggs.—The market was steady, and very little change was noticeable. Straight-gathered were about 16c. to 164c. per dozen, in the country, and were selling here at 19c., No. 1 candled being 20c., selects being 23c. and new-laid being about 26c.

Honey.—The market was quoted at 11c. to 15c. per lb. for white clover comb, extracted being 104c. to 11c., dark comb 114c. to 124c., extracted 7c. to 74c. Demand was light.

Butter.—Prices in the country declined fractionally, and were easier here also. Best Quebec creamery was selling here at about 224c., while factorymen are receiving about 22c. Finest Townships were easier, fancy being about 224c., and choice about 22c.

Total shipments from Montreal since May 1st, were 7,500 packages, or 2,000 less than a year ago.

Cheese.—The market held very steady, and quiet, there being several carloads of England early in the week. Prices were unchanged, at \$6.11 to \$6.11.

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SALES NOTES will be cashed or taken for collection.

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

less and Townships, and 11c. to 114c. to cover all grades of Ontario, colored being at a slight premium.

Exports from Montreal since May 1st were 747,500 boxes, or 28,000 less than a year ago.

Grain.—The market for oats was much easier, being 41c. to 414c. per bushel for No. 2 Canadian Western, carloads, store, No. 3 being 394c. to 40c. No. 1 barley was steady, at 54c., No. 4 being 50c.

Flour.—The market was steady, being \$6.30 per barrel, in bags, for Manitoba first patents, \$5.80 for seconds, and \$5.60 for strong bakers'. Ontario patents were steady, at \$5.50; straight rollers, \$5.25.

Feed.—The market for millfeed was firm and unchanged, being \$20.50 to \$21 per ton, in bags, for Ontario bran, \$22 for Ontario middlings, \$33 to \$34 for pure grain mouille, and \$26 to \$29 for mixed. Manitoba bran was \$20, and shorts \$22. Cotton-seed meal was quoted at \$27.

Hay.—The market for hay was steady, at \$14.50 to \$15 per ton for No. 1, carloads, Montreal, No. 2 extra being \$13.50 to \$14, No. 2 being \$12 to \$12.50, clover mixed being \$10.50 to \$11, and clover, \$9 to \$10.

Hides.—The market was dull and steady, save that lamb skins had advanced to 30c. each. Hides were 8c. per lb. for unselected and for No. 3; No. 2 were 9c., and No. 1 were 10c. Calf skins were 12c. and 14c., for Nos. 2 and 1, respectively, and horse hides \$1.75 and \$2.50 for Nos. 2 and 1, respectively. Tallow was 14c. to 5c. per lb. for rough, and 5c. to 6c. for rendered.

Chicago.

Cattle.—Beeves, \$4.90 to \$8.30; Texas steers, \$3.50 to \$5.65, Western steers, \$4 to \$6.75, stockers and feeders, \$4 to \$6.25, cows and heifers, \$2.70 to \$6.60; calves, \$6.50 to \$8.50.

Hogs.—Light, \$8.40 to \$9; mixed, \$7.85 to \$8.85; heavy, \$7.60 to \$8.40; roughs, \$7.60 to \$7.85; good to choice heavy, \$7.85 to \$8.40; pigs, \$8.35 to \$9; bulk of sales, \$7.95 to \$8.30.

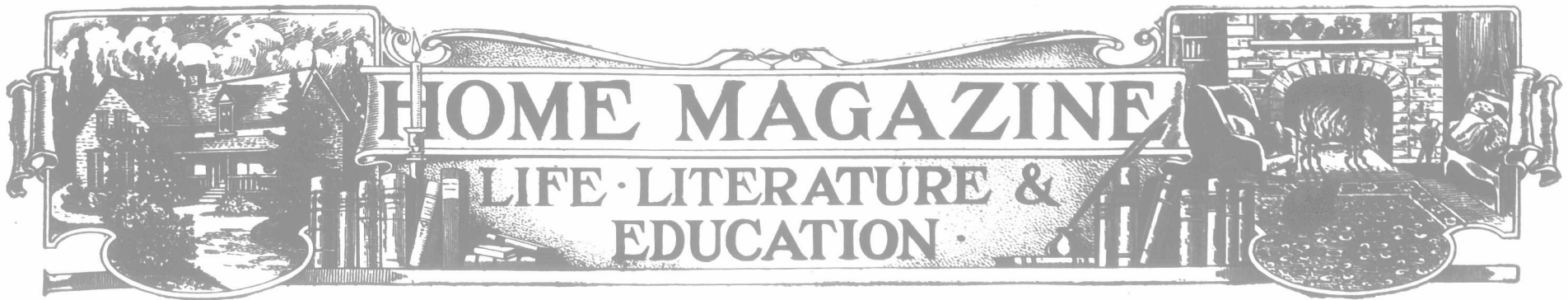
Sheep and Lambs.—Native, \$2.60 to \$4.60; Western, \$2.75 to \$4.60; yearlings, \$4.50 to \$5.75; lambs, native, \$4.50 to \$7.10, Western, \$4.75 to \$7.10.

Cheese Markets.

London, Ont., 240 white sold at 10 13-16c.; 70 colored at 104c. St. Hyacinthe, Que., 104c. Cornwall, Ont., white, all sold at 10 13-16c.; colored, 10 15-16c. Cowansville, Que., 104c. and 10 11-16c. Listowel, Ont., 104c. Ottawa, Ont., white, 104c.; colored, 104c. Victoriaville, Que., 104c. Iroquois, Ont., 10 13-16c. Alexandria, Ont., 104c. Pierson, Ont., 104c. Brantford, Ont., 104c. Napanee, Ont., white sold for 10 15-16c. and colored for 104c.

Buffalo.

Cattle.—Prices unchanged.
Veals—\$7 to \$10.
Hogs.—Heavy, \$8.85 to \$9; mixed, \$9 to \$9.25; Yorkers, \$9.30 to \$9.50; pigs, \$9.50 to \$9.60; roughs, \$7.35 to \$7.50; daries, \$8.75 to \$9.50.
Sheep and Lambs.—Lambs, \$5.50 to \$7.25; yearlings, \$5.75 to \$6.25; wethers, \$5.25 to \$5.40; ewes, \$4.25 to \$4.75; mixed, \$3 to \$4.75.



HOME MAGAZINE
LIFE · LITERATURE & EDUCATION



Ralph Waldo Emerson.

Little Trips Among the Eminent.

"Lives of great men all remind us
We may make our lives sublime,
And, departing, leave behind us
Footprints on the sands of time."

We have been requested, more than once, to give a series of sketches on the lives of eminent men and women. This, then, the reason for the following. A beginning has been made upon Emerson, simply because he happens to be the writer about whom material has been for some time in course of preparation. The circumstance is not, perhaps, regrettable, since Emerson, besides being "the most original and influential writer that America has yet produced," leads on through his multifarious acquaintances to the many eminent men and women of his day, who were either drawn towards him by his genius, or whom he met on his trips to Europe. The sketches, it may be understood at the beginning, are not intended to be comprehensive. It is impossible that they could be so within limited space. They are merely intended to be, as the title of the series indicates, "little trips" among the great, rambling biographies in miniature, written with the aim of investing those far-off ones with the interest that attaches itself to humans, and in the hope that, through this human touch, our readers may be inspired to investigate further for themselves.

RALPH WALDO EMERSON.

(In the compiling of this sketch, we are especially indebted to Cabot's Memoir, with selections from Emerson's letters and journal.)

Ralph Waldo Emerson, son of the Rev. William Emerson, was born on May 25th, 1803, in Boston, then a quiet old place of quaint houses and large gardens and orchards. The house in which he first saw the light stood well back from the street, and across from it at that time was a large commons or pasture, where cow-bells tinkled and the boys of the town played. The young Emersons, however, were never permitted to play with the boys in the street. From babyhood they were com-

and letters, for which, it must be admitted, they showed remarkable aptitude. There is, however, something a little pathetic in the story which the famous Ralph Waldo afterwards told, of how he used to stand and watch wistfully the boys on the common. Childhood, no matter how precocious, has a right to play, and, perhaps, had the young Emersons spent more time at ball, and less in poring over "Plato and Plutarch, Shakespeare and Milton," they might have been less susceptible to that fatal lung trouble which later carried off so many of their brilliant circle. In that event, perhaps, the Emerson which we know might have been lost to the world—life is a great mystery—but it is safe to say that his unusual mind would have manifested itself in some other way, not less illustriously.

In 1811 the father died, and Mrs. Emerson was left with a family of small children and very little means of support. She at once took boarders, and the wonderful boys, William, Charles, Ralph and Edward, helped with the work. They were very poor. Sometimes they had little food, and it is told that Ralph and Edward had for long enough but one great-coat between them, and had to take turns in going without. "Chill penury," however, does not always repress.

Ralph's schooldays began in a private school before he was three years old. At ten he was reading Virgil; at eleven he entered the Latin School, and in 1817 started to Harvard College. Here he was not regarded as outstandingly brilliant. "Mathematics I hate," he wrote at the time, and probably his failure in such subjects "pulled his average down," to speak in language well understood of modern school circles. However, he was known as a great reader of classics and poetry, and he succeeded in taking two Bowdoin prizes for dissertations; also a Boylston prize of \$30 for declamation. He sent the money gleefully to his mother, and it tells a pathetic tale of financial straits that it "at once went to pay the baker's bill." Indeed, the financial stress during those college years was always as the rubbing on a sore, and the letters of the lads are painfully filled with discussions on ways and means of making ends meet.

Ralph was always of retiring disposition during his school days, but a few of the studious found him out, and he became one of the leading spirits in a Book Club organized for the study of literature. A classmate wrote of him as he was at this time: "He had then the same manner and courtly hesitation in addressing you that you have known in him since. He was not talkative . . . but there was a certain flash when he uttered anything that was more than usually worthy to be remembered."

After leaving college he tried school-teaching for a while—and hated it. "Better tug at the oar," he wrote once to a friend while in the thick of it, "better dig the mine or saw wood; better sow hemp or hang with it, than sow the seeds of instruction"—all of which was very strong language, which showed plainly enough that "Emerson" had not yet found his vocation.

He had some dreams of oratory, but even from the beginning it appears that he was not fitted to the pulpit-orator which he later essayed to be. He was not filled with the necessary fire and enthusiasm. He was given to fits of discouragement. "The dreams of my childhood are all fading away," he complains in his

journal, "and giving place to some very sober and very disgusting views of a very quiet mediocrity of talents and condition: nor does it appear that any application of which I am capable, any efforts, any sacrifices, could at this moment restore any reasonableness to the familiar expectations of my earlier youth." It is the cry of a soul bound down to a monotonous round, and without any clear beacon ahead; yet the call of the pen must have been making itself faintly heard. "I keep school," he says, "I study neither law, medicine, nor divinity, and write neither poetry nor prose." . . . This, too, is suggestive as foreshadowing the future independence of thought upon which his place in the world would rest: "When I have been at Cambridge, and studied divinity, I will tell you whether I can make out for myself any better system than Luther or Calvin, or the liberal besoms of modern days."

In 1825, then, he went up to the Divinity School. About the time of entering, he wrote: "My reasoning faculty is proportionately weak. . . . Nor is it strange that, with this confession, I should choose theology; for the highest species of reasoning upon divine subjects is rather the fruit of a sort of moral imagination than of the reasoning machines, such as Locke, and Clarke, and David Hume." As a matter of fact, Emerson never became a logician; he was never strong on argument; he simply saw with keen perception or intuition, and told what he saw.

During these early years he was much hampered by ill-health, due to weak lungs. "Health, action, happiness," he writes in his journal,—"how they ebb from me! Poor Sisyphus saw his stone stop once, at least, when Orpheus chanted. I must roll mine up and up and up how high a hill." In the fall of 1826 he went south for the winter, and spent his time "writing sermons for an hour which may never arrive." In June he returned, and preached for a time, but was not well enough to take a regular church.

In 1827 he met Ellen Tucker, his future wife. "She is seventeen years old," he wrote his brother, and very beautiful by universal consent." In a year he became settled in a Unitarian church, and married Miss Tucker, who, however, died of consumption in a year.

Of his preaching at this period of his life, Dr. Hedge says: "His early sermons were characterized by great simplicity and an unconventional, un-theological style which brought him into closer rapport with his hearers than was commonly achieved by the pulpit in those days." . . . "One day," says Mr. Congdon, "there came into our pulpit (at New Bedford) the most gracious of mortals, with a face all benignity, who gave out the first hymn and made the first prayer, as an angel might have read and prayed." From such passages as these, Emerson's peculiar magnetism may be imagined, and it does not seem wonderful that Margaret Fuller and others of the keen-thinking of Boston and its vicinity frequently came to hear him preach.

Emerson, however, was not orthodox. He disagreed on some points with the tenets of the church, and in 1832 stopped preaching as a settled minister, although he still continued, for some years, to take an occasional pulpit for a day. He had found that in the narrow, somewhat Puritanical atmosphere of his time he could not exercise independent

thought. Moreover, he revolted against "official goodness." Writing of Coleridge to his aunt, Mary Emerson, a year or so previously, he had expressed himself when he said: "I like to encounter these citizens of the universe that believe the mind was made to be spectator of all, inquisitor of all"; yet, on throwing up his church, he felt somewhat adrift. "But what shall poor I do?" he writes in his journal, "who can neither visit, nor pray, nor preach to my mind?"

His mania for independence, however, was paving the way for him. "It is exhilarating once in a while," he notes, "to come across a genuine Saxon stump, a wild, virtuous man who knows books, but gives them the right place in his mind, lower than his reason. Books are apt to turn reason out of doors. You find men talking everywhere from their memories, instead of from their understanding." And again, "I walk firmly toward a peace and freedom which I plainly see before me, albeit afar."

That peace, indeed, was coming in the discernment of his mission, however dimly, the mission to teach men the independence and inviolability of every human soul, to urge upon them self-reliance, self-development. While not utterly accepting pantheism, he began to look upon the world of nature as a mere symbol of the universal spirit, to believe that God speaks through the mind of every man. He would throw off old things, old ideas, as a snake sloughs off an old skin, if better ideas, better ways, were to be found. Consistency was a god of the times, but he began to denounce it as the bane of little minds.

Naturally, now, his mind turned to writing, and he planned a magazine in which a man could speak out his thought. His brilliant brothers were to help him. "Give me my household gods against the world," he cries, "William and Edward and Charles."

Ill-health, however, interfered with the scheme, and on Christmas Day, 1832, he sailed in a little trading brig for the Mediterranean, on a memorable trip. He rapidly improved in health, "found everywhere the same land of cakes and ale," was disappointed somewhat in the great men he met. "I never get used to men," he confides to his journal. "They always awaken expectations in me which they always disappoint." He was yet to learn that men do not wear their hearts and emotions on their sleeves, and might have understood the fact better if he had been able to read what Mr. Henry James (the elder) said of himself at a later day, when he had attained his own position of serene eminence: "On the whole, I may say that at first I was greatly disappointed in Emerson, because his intellect never kept the promise which his lovely face and manners held out to me. He was to my senses a literal, divine presence in the house with me; and we cannot recognize literal, divine presences in our houses without feeling sure that they will be able to say something of critical importance to one's intellect. It turned out that any average old dame in a horse-car would have satisfied my intellectual rapacity just as well as Emerson . . . and though his immense personal fascination always kept up, he at once lost all intellectual prestige to my regard. I even thought that I had never seen a man more profoundly devoid of spiritual understanding. In his talk or private capacity he was

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one of the least remunerative men I ever encountered."

During his trip, Emerson met Bentham, Mill, Landor, Wordsworth, Colridge, Carlyle, and many others. It is entertaining, at this present date, to read what he then wrote of them. "To be sure, not one of these is a mind of the very first class; but what the intercourse with each of them suggests is true of intercourse with better men—that they never fill the ear, fill the hand; no, it is an idealized portrait which always we draw of them. Upon an intelligent man, wholly a stranger to their names, they would make in conversation no deep impression—none of a world-filling fame. They would be remembered as sensible, well-read, earnest men—not more. . . . The comfort of meeting men of genius, such as these, is that they talk sincerely. They feel themselves to be so rich that they are above the meanness of pretension to knowledge which they have not, and they frankly tell you what puzzles them. . . . But Carlyle, Carlyle is so amiable that I love him."

As a matter of fact, he spent some time with Carlyle at Cranenputtock, and seems to have seen no trace of the grouching usually attributed to the brilliant but dyspeptic old rhapsodist and apostle of hard work. The friendship between the two was henceforth practically lifelong. It was surely the attraction of opposites. As Cabot says: "Had they been required respectively, to define by a single trait the farthest reach of folly in a theory of conduct, Carlyle would have selected the notion that mankind need only to be set free, and led to think and act for themselves, and Emerson the doctrine that they need only to be well governed." There was a strong bond of union, however, each looked upon the other as a sincere seeker for truth.

On his return, Emerson continued to preach intermittently for about four years, and began the career of lecturing which he followed during the rest of his active life.

In 1834 some property of his wife's came to him, giving him an income of about \$1,200 a year. He planned a home in the country for himself, for mother, and his brilliantly clever brother Edward, but before the idea could be carried out, Edward died of tuberculosis in the West Indies. Had he lived it is generally believed that Ralph Waldo might have had to take second place in the galaxy of the Emerson family.

Not long afterwards he bought the house in the little village of Concord, Mass., which was to be his home for the rest of his life. Here, in 1835, he bought his second wife, the Misses Lidian, whom in his letters he affectionately addresses as "Lidian." The house had plenty of land about it, and in the rear a garden with a path leading off across a field to the open country, and the garden and field were to be so arranged that the fact of illustrious neighbors would be no lover of solitude. "I wish people often about me," he says, "appears to have de-termined here for the country. . . . I have a view of the sea from my window." "Lidian," when telling of her respective home, "are surrounded by many friends, and I am very busy every day with my friends."

Emerson seems to be attracted to the center of constellations, so that he became the center of a constellation of eminent gathering of men and women. To his circle belonged frequently the Ripleys, the Aschts, Margaret Fuller, Ellery Channing, Theodore Parker, and many other less illustrious. Agassiz, for example, Hawthorne settled in Concord, Mass., in "the old man's house" through living with his wife's cousin, occasionally met him on the "one walk they had together," a twenty mile tramp to a "new village." It appears to have been a mutual enjoyment, yet Emerson and Hawthorne never closely approached each other. As has been said, they "interdispersed the other's name here." Neither could quite

grasp the thought or emotion of the other.

When Hawthorne died, Emerson wrote, "I thought him a greater man than any of his words betray; there was still a great deal of work in him, and I hoped that he might one day show a purer power." He regretted that they had never "conquered a friendship," yet confessed, "I never read his books with pleasure; they are too young." Surprised he might have been had it been foretold to him that one day, as a writer of pure literature, this man of moonshine should be given by universal accord the highest place of all Americans.

In the house of Emerson, too, for two years, lived Thoreau, invited thither to board and work when he chose, on condition that he should teach Emerson gardening and fruit-culture. A wonderful pair, digging in the garden there—Emerson with his feet already on the ladder of fame, Thoreau still at its foot, but with the fire of the gods already in him.

Little wonder, with so many men of minds about, that a clique should start; that it should be somewhat sneeringly named by those without—and with some little appropriateness—"Transcendentalist"; that a magazine, "The Dial," should be launched; that a mania for plain living and high thinking should be a feature of the time and the place.

There was started, too, the famous Saturday Club in Boston, to which Emerson went down regularly to meet Longfellow, Dana, Dwight, and some of those mentioned above.

Many as were Emerson's friends, however, and greatly as he was admired, he speaks frequently of his inability to come really close to people. His differences in religious opinion kept him aloof from some, for he never would argue things out, and so meet men on common ground. Of him, a popular preacher of the time said, "Mr. Emerson is one of the sweetest creatures God ever made; there is a screw loose in the machinery somewhere, yet I cannot tell where it is, for I never heard it jar. He must go to Heaven when he dies, for if he went to hell the devil would not know what to do with him. But he knows no more of the religion of the New Testament than Balaam's ass did of the principles of the Hebrew grammar."

People could not understand his attitude of constant inquiry. They wanted settled, stated conclusions, instead of this constant reaching out for more light, more truth.

Moreover, he was reserved, and often lamented the fact; there were "fences," he said, between him and some of his dearest friends. "Some people," he wrote in his journal, on one occasion, "are born public souls, and live with all their doors open to the street. Close beside them we find, in contrast, the lonely man, with all his doors shut, reticent, thoughtful, shrinking from crowds, afraid to take hold of hands, thankful for the existence of the other, but incapable of such performance, wondering at its possibility; full of thoughts, but paralyzed and silenced instantly by these boisterous masters; and, though loving his race, discovering at last that he has no proper sympathy with persons, but only with their genius and aims. He is solitary because he has society in his thought, and, when people come in, they drive away his society and isolate him. We would all be public men if we could afford it. I am wholly private, such is the poverty of my constitution. Heaven betrayed me to a book and wrapped me in a gown. I have no social talent, no will, and a steady appetite for insights in any or all directions to balance my manfold insensitivities." "At another time he wrote that 'you might turn a yoke of oxen between every pair of words' when he met strangers, and spoke of his "porcupine impossibility of contact with men."

And yet men invariably loved him. Thoreau, it was said, unconsciously imitated him in manner and gesture. Margaret Fuller tried hard to get into the inner circle of his regard,

but he had to tell her, gently, as was his wont, that this was impossible.

He wrote, however, many letters, rare letters, even in that time of remarkable letter-writing, and with pen in hand he could partly break down the barriers which he so detested.

For some time Margaret Fuller was editor of "The Dial." Emerson succeeded her, then Theodore Parker, but before many years the little magazine gasped out its last breath. The ordinary populace had no especial liking for the Transcendentalists, and a magazine cannot survive without subscription lists.

Emerson now began to write books, while still continuing his lectures on almost every subject under the sun—biography, literature, history, art, morals, politics and philosophy. In 1836 he published his "Nature," but in twelve years only 500 copies were sold. The essay, however, met with the approval of Carlyle, and in so far its author must have considered it a triumph.

Emerson's method of working was to write every morning, giving the afternoon up to reading, entertaining friends, and meditation out upon the hills. He was, indeed, no follower of the thought of others, but he read for the stimulus of suggestion. He believed that a writer or thinker must not be tied too much to books, yet he was impatient of the self-made men whose "originality rests on their ignorance." He would think along his own lines, but he would not be ignorant of the thoughts and accomplishments of others.

In 1837 he gave the Phi Beta Kappa speech on the "American Scholar," which Mr. Lowell considered "an event without any former parallel in our literary annals," and not long afterwards he gave the address to the Divinity students at Cambridge, Mass., for which he was so severely criticised. He did not retract, and took the criticism calmly. "Society has no bribe for me," he declared, "neither in politics, nor church, nor college, nor city." And again: "Let me never fall into the vulgar mistake of dreaming that I am persecuted whenever I am contradicted." He was, at this time, as a matter of fact, in advance of the ultra-Puritanical ideas of a time. As the years went on, thought advanced in his direction, and then the university which had regarded him askance made haste to do him honor.

In the same year, 1837, he incurred some more criticism for an address on slavery, which was scarcely fervent enough to suit the prevailing sentiments of New England. He heartily endorsed, however, Lincoln's subsequent course.

When the famous Brook Farm and Fruitlands experiments were made—intended to be ideal communities of co-operating and congenial souls—he declined to have anything to do with them; the individuality of the ordinary farmer appealed to him more strongly than this Halyon Hall idea. "Why should not the philosopher realize in his daily labor," he says, "his high doctrine of self-trust? Let him till the fruitful earth under the glad sun, and write his thought on the face of the ground with hoe and spade. . . . Let him thus become the fellow of the poor, and show them by experiment that poverty need not be. Let him show that labor need not enslave a man more than luxury that labor may dwell with thought. . . . A farm is a poor place to get a living by, in the common expectation. But he who goes thither in a generous spirit, with the intent to lead a man's life, will find the farm a proper place. He must join with it simple diet and the annihilation by one stroke of his will of the whole nonsense of living for show. He must take ideas, instead of customs. He must make the lie more than meat, and see, as has been greatly said, that the intellectual world meets man everywhere."

In 1816 he went, on invitation, to give a lecturing tour in Great Britain. Everywhere, now, he was received with the greatest consideration. Men of letters and members of the nobility hastened to do him honor. Again he visited Carlyle, now at Chelsea, London. He heard Colclough, Bright

and Fox speak; was the guest of Dr. Brown, and met "Christopher North" (Prof. Wilson), Lord Jeffrey, the artist David Scott, Mrs. Combe, daughter of the famous Sarah Siddons; Sir William Hamilton, Harriet Martineau, Wordsworth, MacCaulay, Bunsen, Hallam, Disraeli, Clough, Froude, Wilberforce, Dickens, Tennyson, and many others of that brilliant period.

De Quincey he speaks of as "A very gentle old man, speaking with the greatest deliberation and softness, and so refined in speech and manners as to make quite indifferent his extremely plain and poor dress." Carlyle was now "an awful talker," throwing "sneers and scoffs in every direction." Wordsworth he found "full of talk on French news, bitter old Englishman he is; on Scotchmen, whom he contemns; on Gibbon, who cannot write English; on Carlyle, who is a pest to the English tongue; on Tennyson, whom he thinks a right poetic genius, though with some affectation." So much for Wordsworth on his contemporaries.

Of Tennyson, Emerson says: "I was contented with him at once. Carlyle thinks him the best man in England to smoke a pipe with, and used to see him much; had a place in his little garden on the wall, where Tennyson's pipe was laid up."

Although Emerson's lectures did not, in Britain, draw a great, popular audience, a select few seem to have attended them regularly. He speaks of Barry Cornwall, and Lyell, and Lord Morpeth, and the Duchess of Sutherland, as his auditors, and of Carlyle making "loud Scottish Covenanter gruntings of laudation, or at least of consideration, when anything strikes him, to the edifying of the attentive vicinity." He speaks, also, of Leigh Hunt, Arthur Helps, and Rowland Hill.

From England he went to Paris, where everyone was wearing the revolutionary red, and profited by the little excursion.

After his return to America, the drying up of all sources of income either by lectures or essays, during the great civil war, threatened him with severe pecuniary straits for a time. He had now a family, and his liberal housekeeping, with his house open to all comers, had prevented the laying away for a rainy day. The period was, however, safely weathered.

Regarding his personality at this time, when at the height of his powers, the opinion of two illustrious people may be interesting. "There is a vague nobleness and thorough sweetness about him," wrote Harriet Martineau, "which move people to their very depths, without their being able to explain why. The logicians have an incessant triumph over him, but their triumph is of no avail. He conquers minds, as well as hearts, wherever he goes, and, without convincing anybody's reason of any one thing, exalts their reason, and makes their minds of more worth than they ever were before."

John Burroughs, who saw him when visiting West Point Academy with a Board, says: "My attention was attracted to this eager, alert, inquisitive farmer, as I took him to be. When, on going home at night, I learned that Emerson was on that Board of visitors, I knew at once that I had seen him, and the thought kept me from sleep." Burroughs met him next day, and adds: "I shall never forget his serene, unflinching look."

In 1867 Emerson was chosen orator on Phi Beta Kappa day at Cambridge, now as the foremost man of letters of his day in New England. In 1866 he received the degree of LL. D. from Harvard, and in 1870 was invited to give a course of university lectures at Cambridge, Mass. In 1872 his house was burned down. He had been failing in health, "and the worry aggravated the trouble." Immediately his townsmen and admirers collected a gift of \$12,000, and pressed upon him another trip to Europe. He finally assented, and marks among the events on this tour a meeting with M. Taine in Paris, hearing Ruskin lecture in London.

and being entertained by Prof. Max Mueller at Oxford.

When he reached home, in May, he was met by the "whole town, down to the babies in their wagons" whistles blew, church-bells rang out joyous peals, engines added their deep notes to the happy clangor, and triumphal arches marked his route to his old home, which had been completely restored during his absence.

From this time forward he never wholly regained his health. He became frail and forgetful, but as he went about everywhere in his own part of the country he was stoutly watched over by an unknown body-guard, some one of whom could usually be reckoned on to provide a seat, a carriage, or to render any needed service.

His last years, indeed, were tranquil and happy, his chief enjoyment being to sit on the piazza and watch his grandchildren at play.

In April, 1882, he was taken ill of pneumonia, and after a few days illness quietly passed away. He was buried at Sleepy Hollow, near the graves of Hawthorne and Thoreau.

To give anything like a clear idea of Emerson's thought, or, indeed, of any man's thought, within the limited space of a short article, is obviously among the impossibilities. One must go to a man's works, to learn his mind, and Emerson was the writer of many books, the variety of whose contents is very inadequately indicated by the general titles: (1) Nature, Addresses, Lectures; (2) Essays (2 vols.); (3) Representative Men; (4) English Traits; (5) Conduct of Life; (6) Letters and Social Aims; (7) Society and Solitude; (8) Poems; (9) Lectures, Biographical Sketches; (10) Miscellaneous; (11) Natural History of Intellect.

Briefly, in closing, he was an optimist. He believed in the high office and limitless possibilities of man. The highest revelation he considered to be that God is in every man, "the spark in the clod" of which Browning speaks. "Men ought," he said, "to behold the presence of God in every gleam of human virtue however dim and distorted, and not merely in the eminent example of Jesus. They ought to present the idea of salvation, not as a mystic formula, but as a universal truth, realized wherever a man, through death to selfishness, rises to the life of humanity—a life governed by the perception that all private and separate good is a delusion."

A man, he held, contains all that is needful to his government within himself, and accomplishes all that is needful if he lives up to the best that is in him. His duty, then, is self-reliance, self-growth. "I believe in this life," he used to say, "I believe that it continues." He insisted that we should go through life with good cheer, and that we should not be satisfied to stay in a rut. In his lectures on "Human Culture" he advocated "man's education by manual labor, by the perception of truth, by the sense of beauty, in art and in poetry, by his affections, and the reaction of the will against the tendency of his social disposition to involve him in tradition and routine, by the economy of his daily living, and the stand he is sometimes called upon to make against it—lastly, by the highest ascension of the soul, the dominion of the moral sentiment."

He vividly realized the need of progression. Even as early as 1835 he said: "But the common life is an endless succession of phantasms, and long after we have dreamed ourselves recovered and sound, light breaks in upon us, and we find we have yet had no sane hour. Another morn' rises on mid-noon."

He believed that we should be constructive, rather than destructive—as Cabot says: "He liked the sun's way of making civilization cast off its discuses better than the storm's." "It is wholesome to man," he says, "to 'Fate'—to look not at Fate, but the other way—the practical view is the other." And again, in the "Over Soul": "We grant that human life is mean, but how did we find out that it was mean?" He implies that we can spend our time better in doing something to help than in merely find-

ing fault. If we pull down a house we should put a better in its place. And he advises a spirit of tolerance towards others. "We can afford to allow the limitation," he says, "if we know it is the meter of the growing man."

Emerson lends himself well to quotation, and one might go on indefinitely. Better, then, to stop with this, and refer those who would know more of him to his books. M.

Hope's Quiet Hour.

There is Nothing Hid.

There is nothing hid which shall not be manifested, neither was anything kept secret, but that it should come abroad.—S. MARKS, ix, 22.

In the long run all hidden things are known.

The eye of truth will penetrate the night,

And good, be it hid, its secret shall be known.

However well it's guarded from the light.

All the unspoken motives of the breast

Are fathomed by the years, and in the contest.

In the long run.

—RITA WHEELER WATSON.

"Men will out," says the proverb, though probably when a man is bent on hiding he has little faith in the word.



Where Roof-lines and Windows Count.

Designed by Mrs. A. Reid, artist, Indian Road, Toronto.

ing. But number is not the only secret which is sure to be openly manifested. "There is nothing secret, but that it should come abroad," says our Lord. "Whatever ye have spoken in darkness shall be heard in the light, and that which ye have spoken in the ear shall be proclaimed upon the housetops." We are constantly finding out the truth of His words even now, though the day has not yet come when God shall judge the secrets of men and bring to light the hidden things of darkness. That day comes so near that we are apt to care little about it, and may be more interested by the thought that even now the secret thoughts of our hearts are plainly visible at least the general direction of them—to our acquaintances, and especially to our relations. "I wish you could see what is hidden beneath the surface. A teacher once asked a small boy how large a piece of ice he would get if his mother had a stove in among the family. Several persons, including the teacher, he answered: "A stove." The teacher thought he had made a mistake, and inquired how the boy had come to his answer. "I know," he said, "if my mother had a stove in among the family, she would get a stove." "I don't know," said the boy, "but I'd get a stove."

and can judge how those thoughts will blossom out into action—and so can their elders.

We can make a pretty safe estimate of a person's general character sometimes by a few remarks he may make. For example: Would you like to engage this man to work for you? Do you think he would be a success in any business?

Roebottom was a roofer. He was engaged on a Mickle-street house. One day, as he was lurching, he was heard to give a yell of pain.

"What's the matter, Roebottom?" a carpenter asked.

"I got a nail in my foot," the roofer answered.

"Well, why don't you pull it out?" said the carpenter.

"What?" "In my dinner hour," yelled the roofer reproachfully.

"We give ourselves away," as the saying is, just as plainly as that, every day of our lives. Two people may live in the same house, doing much the same work, and yet the one life may be very plainly consecrated in the highest service, while the other is plainly seen to be selfish and worldly. It is especially the little things which reveal the secret spirit of a life, the little opportunities which are gladly seized or carelessly let slip.

If only our trust and love were unflinching, every body around us would know that our secret life was hid with Christ in God. There is never need to proclaim to the world that your thoughts are true and lovely. Keep your secret soul white and shining and loyal in God's sight, and your world will not fail to know it without being told. Our Lord made no attempt to assert His innocence to Pilate.

Her lips can whisper the tenderest words
That wavy and worn can hear,
Can tell of the dawn of a better morn,
And only the cowardly fear.

And she can walk where'er she will,—
She will not never alone,
The work she does is the Master's work,
And God guards well His own.

We read in Ezekiel ix. of a mark which is set on the foreheads of those who hate evil—it is not a mark which they can place on themselves, but it is written there by "a man clothed with linen." Then, in the Book of Revelation, this seal of God is mentioned several times, and in the last chapter we are told of the servants of Christ: "They shall see His face, and His Name shall be in their foreheads." How is that mark of possession indelibly stamped, outwardly and visibly, on the willing servants of the King? "They shall see His face," and, looking daily at that Vision of perfect holiness, the secret desire of their hearts shines through the veil of flesh—as secret desires always do.

There is another mark mentioned—the mark of the beast—which is the outward sign, on forehead and hand, of those who worship the beast. This also is frequently mentioned in the Book of Revelation, and in Chapter xiii. we read that "no man might buy or sell, save he that had the mark, or the name of the beast, or the number of his name." The state of affairs in the markets of a great city must have been far worse in those days than they are now. Plenty of people can prosper in business without stooping to trickery or meanness of any kind. But those who do stoop to "worship the beast," either by dishonesty or by letting their kingly spirit be dragged down by vices which may well be called "beastly," need not fancy that they can hide the fact. Thoughts and habits which are encouraged for years always write themselves on the body. Those who work in hospitals know the awful truth of Rev. xvi. 2—and the sins of men are still visited upon their children. We are too closely linked with each other for sin's consequences to stop short with the sinner. This is one of the mysteries which God has not explained to us, though He never fails to make all things work together for the good of those who choose His service. We do not understand His ways always, but we always know that the path of righteousness is bright and glad and safe, while the path of unrighteousness is dark and miserable and dangerous. And, knowing this,

Faith keeps its way, hand-knit with
Reverence,
And both with knowledge going on be-
fore,
Climbs out of deeper depths to high,
serener heights,
And climbs forevermore."

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.]

Our Homes.

[Repeated requests for information re house-furnishing, etc., is the raison d'être for the following series of articles.]

"Home is home, though it be never so homely," runs the old proverb, and that is very true. One's heart can twine even about a log shack and a pigpen, provided one loves the people who inhabit the shack enough. At the same time, what a pride and interest one takes in an attractive and well-kept home! It may not be grandly expensive; that scarcely enters into the calculation at all, provided there is the coziness of trees, shrubs and vines, and of quiet coloring and tasteful furnishing. If the house itself has been designed with an eye to the picturesque and the beautiful, why so much the better. Perhaps you are going to build a new house before long. The happy are

you. You have all the possibilities before you, all the chances to study up different types of architecture, and to think out the little touches that will give individuality to the place, mark it out as belonging especially to you, with your mark upon its lintel.

In starting out, then, it is wise to begin with a few general principles—afterwards detail may be evolved.

In the first place decide that, whatever may follow, your house must be substantial, sanitary, light, convenient, well heated, built on well-drained ground, with a good view, and, if possible, a few ready-grown trees for background and shade. Get it in your mind's eye. See it large enough to be airy, yet not any larger than necessary—a large house with many rooms means much work. Recognize that its effectiveness must depend upon simplicity, without stupid plainness—an over-elaborate house, as an over-elaborate dress, or anything else, confuses, and is distracting rather than pleasing. Decide whether you want to have it imposing and dignified or merely picturesque and cozy, then set to work to plan the particular model that will be your ideal. In either case—whether imposing or cozy—resolve from the beginning that you will not have jig-saw ornaments anywhere. These things cost money and merely make a house ugly. Money that goes into them had much better be put into extra solidity of construction, into little conveniences, or even into good wall paper. You cannot afford to spend good hard cash on trimmings that will only make the place look cheap and common. You need it all for things that count.

If you want your house to express chiefly dignity and stateliness, you had better have it very simple in outline, say an oblong, with pillared veranda or porch, in the Colonial style, or an Elizabethan, rather severe yet good in outline. If you prefer it to be merely picturesque and cozy look well to roof lines, chimneys and windows for the especial effects that may be obtained through them. Stone, brick and cement blocks all lend themselves well to the Colonial and Old English types—brick, plaster in soft sand color with exposed timbers, cement, and shingles, or combinations of these, to the picturesque. Cobblestone may often be very effective, especially when used in conjunction with other materials, but there is a little danger that one tire of it. Pavement brick in dull coloring, and dull buff brick if it can be obtained, are considered more artistic than the other kinds, and dark gray or black mortar are preferred to white for all red bricks.

In choosing paints and stains for exterior woodwork, the main consideration is that the color must never be garish. Select quiet colors, browns, grays, olive greens, whatever harmonizes best with the tint of the brick or stone, or you may like ivory white, which is occasionally quite desirable. Where shingles are used for an entire house, or for the upper portion of it, a stain in soft olive or, for certain situations, dull Indian red is best. Artists, as a rule, prefer the silver-gray weathered effect, or a simple application of creosote. At all events do not submit, however urged, to any "funny work," any fanciful figures or diamonds, stripes, etc., on the shingles. Have them all of a color, as quietly beautiful a color as you can think of, one that will harmonize with the green trees, and the grass fields, and the blue sky.

To be continued.

Buffalo Bugs.

Dear Dame Durdan, I have always been going to write and thank you for the many helpful little bits I get from your column. Miss Amateur, for the help she gave me in painting my dining room. I wrote about it last fall, but was not able to do it until spring. From what I found out from one and another, I made a pretty good job of it at last. They tell me that, considering I never mixed perfect colors. It took me a long time for it, as a very large room.

I have an old man, a baby girl, two young girls, and a little girl, two years old, and plenty to do. My house is very large. We use the down stairs mostly, and this summer I have discovered an awful pest in the upstairs, which I have come to the conclusion are

the buffalo moths. About a year ago I found a few black hairy little worms in a closet. I inquired from several what they were, but no one seemed to know, and now they are all through that part. I am killing all I can find with a hot flatiron and a wet rag, by ironing the carpet. I am going to take the carpets all up and wash them, and I have said they shall never go down again. Now, if anyone could give me a little help in destroying them, would be so grateful. I'm afraid they will destroy everything. For about three years past, since I have

Mustard Pickle—2 quarts of small onions, 3 quarts of cucumbers, 3 heads of celery, 3 cauliflowers, 4 green peppers. Put all in brine and let stand twenty-four hours, then put on stove and let come to boil in brine. Remove at once and drain perfectly dry. Take 3 quarts of vinegar, put on stove to warm, and mix together 2 cups of sugar, 1/2 cup flour, 2 cups of mustard, 1/2 oz. of turmeric, 1/2 oz. of curry powder. Wet with little vinegar till smooth, then add to hot vinegar, and let get boiling, then pour over pickles and bottle hot.



The Cozy Type.

House of sand-colored plaster in the "half-timbered" style. (From House Beautiful.)

been married, have been troubled with brown patches on my face. My sister was greatly alarmed, thinking my kidneys or liver was out of order, so I asked the doctor about it at my last sickness. He said they were all right, and that some people have the patches. I did not urge him for medicine, fearing it might hurt the babies, but they do not seem much better. I feel extra well myself. Now, do you know anything that I could do to help remove them, and oblige.

YOUNG FARMER'S WIFE,

Lambton Co., Ont.

Gasoline will kill buffalo bugs, but be extremely careful about keeping windows open and no lights or fire near while using, as it is very inflammable. A

Yellow Pickle—1 lb. mustard, 1 gallon of vinegar, 1 cup salt, 2 ozs. bruised ginger, 2 ozs. allspice, 1/2 oz. red pepper, 2 ozs. turmeric, 2 ozs. cloves, 1 oz. whole black peppers. Put the whole spices in a bag, and let all come to boil in vinegar, when cold add cucumbers, onions, cauliflower, after washing and drying well. You can add cucumbers from day to day as you have them, till you think you have what the sauce will cover nicely. Put something on to keep them down in sauce, and stir every day for ten days, then they are ready for use. I am one of "The Farmer's Advocate" friends.

EMERO,

Oxford Co., Ont.



This House Shows Simplicity and Dignity.

"Alva House," residence of Hon. S. A. Fisher, Minister of Agriculture, Keweenaw, Ont.

description of these bugs appeared in a recent Beaver Circle. Has anyone had experience with the brown patches?

Mustard Pickles.

Dear Dame Durdan, I have been reading "The Farmer's Advocate" for some time and enjoy the home part. I have often thought I would like to write, but I have no letters water. I kept putting it off, and now a recipe for mustard pickles has been in the paper. In without cooking them in a bowl of water, as someone

Another. 1 gallon of white wine vinegar, 3 ozs. of salt, 2 ozs. of turmeric, 3 ozs. ginger root, bruised, 1 oz. cloves, 1 oz. nutmeg, 1 oz. whole black pepper, 1/2 oz. Cayenne pepper, 2 ozs. garlic, 6 table spoons of mustard, 1/2 cups of sugar, 1 cup of flour. Wet this with vinegar and drain the vinegar on the pickle. Cook this all together, then add the pickle. Let them simmer for fifteen minutes, then add 1 teaspoon of curry powder if desired. Adds a nice touch.

S. P.

Fruit Cookies.

Dear Dame Durdan, Will you give me a young lady to run your column for the first time and give recipe for fruit cookies as asked in your issue of 14th etc. This recipe I have used many times and have always met with a success.

Fruit Cookies or Biscuits—1 cup butter, 1/2 cup sugar, 1 egg, 1/2 cup flour, 1/2 cup pecan nuts or almonds, 1/2 cup sweet milk, 2 teaspoons baking powder, 1 teaspoon cinnamon, 1/2 nutmeg, 3 eggs. Roll thin.

I also give below recipe for ginger drop cakes. At this time of year I find them exceedingly nice.

Ginger Drop Cakes—2 eggs, 1 cup lard, 1 cup molasses, 1 cup brown sugar, 1 teaspoonful ginger, 1 teaspoonful soda dissolved in 1 cup boiling water, 5 cups unsifted best patent flour. Drop from tablespoon into well greased pan 3 inches diam. Bake in CANADA.

Cherry Slugs.

Dear Dame Durdan, Your column is always very much read in our home, and a great deal of good information gained thereby. Now, I am coming to you for help. Included you will find a cherry tree leaf, and will you tell me what to spray the tree with and when? It is only a few days ago since this insect, very much like a slug, came on the tree, and since then the leaves are eaten bare—the tree I am afraid will die.

I would like very much to know what to spray it with, and as soon as convenient. Thanking you in advance.

A GARDENER.

Leeds Co., Ont.

The trouble with the cherry leaves is that they are attacked by what we know as the pear and cherry slug, the larva of a saw-fly, about the size of an ordinary house fly. This insect begins to attack the leaves of pears and cherries about the 20th of June each year, and may be found on them throughout the season, up to the time of the frost in the fall. There are two broods in a year. It is easy to control, if taken in time, but that is necessary being to spray the tree thoroughly with arsenate of lead about 3 lbs. to 40 gals. of water, or with Paris green about 1 lb. to 40 gals. of water, add a little lime with the Paris green to prevent burning. Freshly air-slaked lime dusted over the foliage will often destroy the insects. In fact, many fruit-growers simply throw dust over them from time to time, and are able to check it in this way.

Answered by J. Cassels, A.C., Guelph.

Seasonable Recipes.

Roast beef is good when in September, and it is well to get an early start of the beef.

Roast beef, conserve, beef, and cut into bits. For 1 quart conserve, add the juice of 1 large orange and 1/2 almonds cut fine. Add a little of the orange skin cut into the lines, peeled almonds. Measure or weigh an equal amount of sugar and cook down over a low fire.

Roast Beef Pickle—1 qt. vinegar, 1 qt. vinegar, 1 qt. sugar, 1/2 lb. brown sugar, 1/2 lb. brown salt, 1 teaspoon each of cayenne, turmeric, cloves and ginger, 2 teaspoons red pepper. Stew slowly for three hours.

Roast Beef Pickle—Wash and wipe the steaks of tender beef, but do not remove the skin, cut the steaks to the height of the fat, wrap the neck. Put in as many as the jar will conveniently take, then fill the jar to overflowing with cold water. Add a new rubber, put on the top, and keep in a cool place. The jar should be sterilized before using.

Roast Beef Pickle—Put the remnants of cold beef in a pan, using about one eighth fat. Cook the rest of the fat slowly on the back of the stove. Pound the chopped ham to a paste, adding a teaspoonful of paprika or one-fourth teaspoon of Cayenne to each pound of meat. Press the meat firmly into an earthen dish, then strain over it the fat cooked from the fat ham. Melted lard may be used instead. The fat must cover the meat completely, to the depth of a quarter of an inch. Keep in a cool place, and use only necessary for salt, pepper, turmeric, ginger, and a few small onions.

Answered by J. Cassels, A.C., Guelph.

tomatoes and put in a granite kettle cover with an equal amount of sugar and let stand over night. Drain the pure in the morning and cook slowly until rather thick, then add the tomatoes and 2 ozs. preserved or green ginger, and 2 lemons washed and sliced thin with seeds removed. Cook slowly until tomatoes are clear.

Pears may be done the same way, except that they are cut into small pieces.

Any kind of marmalade may be made into a good pickle to use with meats by adding spices and vinegar.

Graham Nut Bread.—Sift some graham flour. Then sift together three times, 3 cups graham flour, half a cup white flour, 1 teaspoon salt, and 3 rounding teaspoons baking powder. Add 1 cup sugar, 1 cup nut meats chopped fine, 2 1/2 cups milk. Mix the whole to a dough, and bake about an hour. (Boston Cooking School.)

Potato and Beet Salad.—Have potatoes and beets boiled, cut them in thin slices, and season with salt and pepper. Crumble the yolk of hard-boiled eggs and chop some parsley. Arrange in the salad bowl alternate layers of potatoes, beets, egg, parsley and dressing, leaving a generous amount of egg and parsley for the top. A little thinly-sliced onion may be added to this salad if liked.

Tomato and Cucumber Salad.—Peel 4 tomatoes and chill. Slice 2 small cucumbers, and soak in salt water. When needed, make a bed of lettuce in a bowl and arrange cucumbers and tomatoes, sliced, in layers. Add also 2 small onions thinly sliced. Pour over all a French dressing.

French Dressing.—Mix 1/4 teaspoon salt, 1/4 teaspoon pepper and 3 tablespoons salad oil together, and slowly add 1 tablespoon vinegar, stirring constantly until thick. Less oil and more vinegar may be used if preferred.

Cheese Custard Pie.—Stir into a smooth batter 1 cupful of curd, 1 cupful of sweet milk, 1/4 a cupful of sugar, 2 eggs, and a grating of nutmeg. Pour this into 2 pie-pans that have been lined with pastry, and bake until the custard is thick.

Cold Slaw.—One small cabbage, 5 or 6 stalks celery. Chop both very fine and mix together. Season with salt and pepper, and mix in salad dressing, or simply 1/2 pint good vinegar.

Stewed Green Corn.—Half dozen medium ears corn. Split down the center of the grains and scrape off the cobs. Boil, uncovered, in a quart of water for 1 hour. Add salt, pepper, 2 tablespoons butter, and 1/4 cup milk. Boil five minutes and serve.

Fried Tomatoes.—Cut six large tomatoes in halves without peeling. Lay them in a pan with skin side down, put in a large tablespoonful melted butter, and fry until tender. Remove the tomatoes to a hot dish, thicken the gravy in the pan with 1 tablespoon flour, and season. Add to it 1/2 pint milk, and stir until smooth. Pour over the tomatoes and serve.

French Pickle.—Slice in an earthen jar one peck green tomatoes, six large onions, and pour over them 1 cup salt. Let stand 24 hours, and drain. Add 1 quart vinegar, 3 lbs. sugar, 1 lb. white mustard seed, 1 teaspoon ground cloves, 1 of ginger, 2 of mustard, 1 of cayenne pepper, and cook slowly for 15 minutes.

Snowballs.—Cream 1/2 cup butter, add 1 cup sugar and beat. Mix 2 level teaspoons baking powder with 2 cups flour, add to butter and sugar alternately with 1 cup milk. Add the stiffly-beaten whites of 4 eggs, just folding them in. Fill buttered cups half-way, and steam 1/2 hour. Roll in powdered sugar and serve as pudding.

Potato Salad.—One teaspoon chopped onion, 2 cups chopped cold potatoes, 3 roughly-chopped hard-boiled eggs, 2 heads lettuce shredded. Mix all with following dressing: Yolks 2 eggs, 1 cup sour cream, level tablespoon sugar, teaspoon cayenne mustard, 1/4 teaspoon pepper, 1 teaspoon salt, 1/2 cup best vinegar, all cooked in double boiler until it thickens. This dressing keeps well, and the quantity is sufficient for two salads of the size given.

Stuffed Eggplant, requested.—Cut an eggplant into halves, and scoop out the flesh, leaving a rind thick enough to hold its place. Chop the flesh fine and mix with an equal amount of breadcrumbs, 2 tablespoons melted butter, 1 teaspoon

salt, 1/2 teaspoon black pepper, and a dash of cayenne. Mix thoroughly and put into shells. Lay on top of each a thin slice of bacon, and bake in a quick oven for 10 minutes.

Eggplant, French Style.—Boil a large eggplant until tender. Peel and mash smooth, seasoning with butter, pepper and salt, and a little thyme. Chop 2 hard-boiled eggs and half an onion. Add 2 tablespoons breadcrumbs. Mix with the eggplant, put into a buttered dish, put breadcrumbs over the top with bits of butter, and bake in a quick oven until brown.

Creamed Cabbage.—Chop one small cabbage fine, cover with boiling water, add soda size of a pea, boil 10 or 15 minutes, and drain off the water. Draw the cabbage to one side of the kettle, melt in the space 1 tablespoon butter, add 1 tablespoon flour, mix until smooth, then stir in a cup of milk, and when it all boils, season, mix with the cabbage, and serve.

Fried Beets.—Wash without breaking the skin, boil tender, slice, and fry in butter. Season, and serve very hot.

Cold Meat.—Two cups cold roast meat chopped fine, 1 teaspoon mustard, 1 hard-boiled egg chopped, salt and pepper to taste, vinegar to moisten. Put in a dish and press. Slice when cold.

Milk as Food.

[Condensed from Farmers' Bulletin 363, U. S. Dept. of Agr.]

The chief bulk of milk is water, the amount of which may vary, even in ordinary unadulterated milk, from 90 per cent. in a very poor product, to 84 per cent. in very rich milk, the average



Such soft, warm bodies to cuddle, Such queer little hearts to heat.

being about 87 per cent. The solids of milk vary from 10 to 16 per cent., and are made up of protein, fats, carbohydrates and mineral matter, all valuable in food. In milk the principal protein compound is casein, the part chiefly utilized in cheesemaking. From the fat butter is made. The chief carbohydrate is lactose or milk sugar.

Beside the above constituents milk also contains large numbers of bacteria. Few of these are in the milk when it is drawn from the cow, but they are so abundant in the air, especially about the stable, and cling in such numbers to the bodies of the cows that they speedily find their way into the milk pails, where they reproduce with astonishing rapidity. The number in milk of a given age of course varies with the conditions. Milk from clean cows, with freshly-washed udders, milked into well-scalded pails, in a clean place, free from air currents, by persons with clean hands and clothes, and quickly cooled and carefully handled may contain very few; while milk from ill-kept animals, untidily handled, in a dirty place, may contain enormous quantities.

A great many kinds of bacteria have been found in milk. Some cause sour-

ing and "lobbering"; others develop strong, unpleasant odors, while yet others cause a sandy orropy consistency. Hence it will be seen that scrupulous cleanliness about everything which comes in contact with milk is of first importance.

In general a well-fed cow gives more and better milk than if poorly fed, but the relative proportions of fat, casein and sugar in the milk are not so greatly influenced by the composition of the food as is the quantity of milk.

Milk should always be strained directly the milking is over, or, better still, it should be drawn into pails covered with straining cloths and subsequently strained again. It should be kept in pure air, free from odors of any kind, and great care should be taken that the water used for washing the necessary vessels is above suspicion, disease has often been communicated by using water containing disease germs.

As bacteria do not develop in a low temperature, milk should be cooled as soon as possible and kept as cold as possible, in order to prevent souring. The application of heat, by pasteurizing or sterilizing, will also keep it sweet, but heat unfortunately causes some changes in chemical composition and flavor. Of the two processes, pasteurization is the better. To pasteurize, place the milk in bottles stoppered with sterilized cotton, immerse to the neck in hot water and heat at 149° F. for half an hour, or at 167° F. for 15 minutes, then quickly cool to 50° F. or less. In sterilizing, the milk is actually boiled. Boiled milk will remain sweet in a warm place longer than pasteurized milk, but is less desirable as food. In either case keep in sterilized, air-tight bottles or sealers.



Such soft, warm bodies to cuddle, Such queer little hearts to heat.

Such soft, warm bodies to cuddle, Such queer little hearts to heat.

MILK FOR CHILDREN. Many physicians consider that infants fed for a long time on boiled milk show a greater tendency to scurvy, rickets and other diseases of malnutrition than when raw or pasteurized milk is used. Fortunately, most healthy children thrive on good pure cow's milk, or cow's milk simply modified. It is the sickly who require special preparations, and their needs vary so greatly that only the physician acquainted with the case, and not always he, can say what change is necessary.

When raw milk is used great pains should be taken not only to obtain fresh, clean milk, but also in caring for it scrupulously until used. Otherwisdiarrhea and other serious disorders may be occasioned.

MILK AS FOOD. Compared with other food materials, milk furnishes the nutritive ingredients in forms in which they may be easily and thoroughly digested by the normal healthy person, and often by those of impaired health. It has sometimes been called a "perfect" food. Although it contains too much water to be called such, its solids furnish a complete

food. It is a rich source of protein, and contains a large amount of fat, which is of great value as a source of energy. Even skim milk, owing to the protein, which it contains, is a valuable food material, and should be used in cooking. For instance, bread made with milk contains more nutriment than bread made with water, and soups are excellent foods, also purees of vegetables to which milk has been added. Milk or cream sauces are also valuable, as are puddings and ices in which milk or cream fill a prominent place. Just here it may be mentioned that milk as a beverage is more easily digested if taken with some other food, such as bread or crackers. If taken alone it should be sipped very slowly in order to prevent coagulation into balls in the stomach.

Among milk products, butter, cheese, Devonshire clotted cream, and cottage cheese are all valuable foods, also buttermilk and koumiss, which are particularly suitable for invalid diet.

The Beaver Circle.

[All children in second part and second book, 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.]

An Old Man's Story.

[The following story was sent us by a subscriber, who says, "Please print this. It may be the means of curing some boys of their cruelty to dogs." . . . Of course, none of you "Beaver" boys are cruel, but if you know some boy who is, you might pass the story on to him.]

A half-dozen boys were gathered about an old barn under which a defenceless dog had taken refuge from their tormenting attentions.

Some were lying flat on the ground, peering under, some were hurling missiles as far as they could reach, while two others, more enterprising still, were trying to pull up a board in the floor.

Amid their excited shouts of "There he is! I see him!" "Hold on, there, I'll fix him!" and kindred exclamations, they did not hear carriage wheels in the soft, dusty road, or see the occupant, until a quaint voice said:

"What is it, boys?" One or two slunk away in a shamefaced manner, but two or three others began all together to tell him what their victim was.

"He hasn't nobody's dog," said one.

"Ad we think he's got hydrophobia," said another, while a third added: "He's no-count dog, anyhow, 'nd if we git him out we're gon' to tie a stone to his neck 'nd drown him over in Summard's pond."

"Has he bitten any of you?" the quiet voice inquired again.

"He sort o' snapped at Wallie's hand, 'nd he'd a bit me if I hadn't been too smart for him," said the largest boy, while Wallie examined his dirty fingers with a martyr-like air.

"I suppose you boys were quietly playing somewhere, and the dog pitched into you?"

There was a profound silence for a few moments, when one bright-eyed little fellow said manfully:


"No, mister, he didn't. He was lying down by the brew'ry with a bone just gnawing it, you know—'nd we sort o' got to pleggin' and pesterin' him, 'nd 'twas when Wallie snatched the bone that he snapped."

"Have you time to listen to an old man's story?"

Instantly sticks and stones were dropped, though two of the lads tried to put on an indifferent front.

Driving his horse into the shade of a building, the stranger began:

"You boys do not realize it, any more than I did when I was a boy, but nevertheless, it is true that every day of our lives we write out a page in the Book of Life, and when one is old, he has a great deal of time in which he must look back and read over those pages, and when I think of tormenting that helpless dog, it seems as if some unseen finger swiftly wrote the story of my life back at a page in the book. I was a goodly child



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WHEN WRITING ADVERTISERS MENTION THE FARMER'S ADVOCATE

be blotted out forever, but it never can! No, boys, we may be sorry for things, may get forgiveness for them, may even forget them for a time, but if we do a wrong it is somehow bound to rise up before us when we least expect it. I hold that in this world we never get entirely away from our wrong-doing. But I do not intend to preach a sermon, but to tell you a story:

"As a boy I was naturally cruel. I delighted to rob birds' nests, torment cats and dogs and smaller children. As I grew older and helped my father on the farm, I was rebuked for my abuse of the animals, and my mother used to say that, if she had her way, I would never get a horse to go anywhere.

"As I grew older I became fond of hunting, and spent many days with my noble dog, Stanley, in the woods. I professed to be very good to him, but of a truth the tender mercies of the wicked are cruel, and when I think of the whippings and kicks the noble fellow received from me while, as I called it, I was training him, I am amazed to think of the affection he gave me in turn, but the worst is yet to come.

"He had never been a good retriever. You know what that is, of course—a dog which will go anywhere, after you have shot your game, and bring it to you without muzzing or tearing it in the least. I had repeatedly beaten Stanley for his failure in this line, though I knew it came from the fact that his former master had whipped him for carrying home dead chickens, or anything like that, which he found in the neighborhood during his puppy days, true to his retrieving instincts.

"One day, while shooting ducks, I said to him: 'Now, sir, you'll bring me that bird out there on that island, or I'll kill you, do you understand it?' I shall always think he did, from the troubled look he gave me, and the pleading way in which he crept to my side and attempted to caress my hand. Roughly I shook him off and bade him go fetch the bird. Obediently he plunged into the ice-cold water, swam to the island, and then stood in an irresolute, troubled manner beside the duck. Angrily I shouted my orders, but he only put his nose to it, then swam back towards me. I sent him back three times when he attempted to land.

I knew that he was too chilled to make it possible for him to return to the island, but my passion mastered me, and again and again I struck him back into the water with my gun butt, fiercely declaring that he would bring me that bird or never land alive. Oh, the look in those brown eyes as he turned them on me at each new effort to land! Boys, I'll never, no never, forget it, and I expect to meet it when I stand before God's bar of justice."

The stranger paused here for a little, ere he found voice to go on.

"Presently he grew so helpless from cold, struggles and blows, that he let himself drift beyond my reach, but, frenzied with rage, I dropped my gun and, snatching up a long pole, I leaned over the water's edge to strike him. As the pole came down some sod or root under my foot gave way, and I found myself struggling in the coldest water I was ever in, but it was only for a few brief moments, for with the icy hands of death already tightening about his faithful heart, that noble dog roused himself at sight of my peril, worked toward me as best he could, and with a last desperate effort, born of love and fidelity, he dragged me to the shore, sank down, and, with a few short gasps, was dead.

"Chilled and stupefied, yet perfectly conscious of the enormity of my sin, I watched by his side, gazing into the still open eyes, and alternately cursing myself and calling him names of endearment which he never heard in his life.

"How long it was before another hunter's voice recalled me to myself and my condition, I do not know, but I know that during that time the suffering of my mind made me unconscious of bodily suffering. I was helped home, but for many weeks I lay between life and death, and they said all my unconscious ravings were of Stanley, and that awful transaction by the lakeside. I have been a different person ever since, but I can never in my life get away from that page in the book.

You understand what I mean, boys,

and all I have to say further is, boys, be kind to every living creature; and if you can do any good by repeating an old man's story, tell it again and again."

There was a silence in the little group, as once more the carriage wheels rolled noiselessly away, but presently the largest boy took some pennies from his pocket and bade two of the smaller ones run to the market and get a good, meaty bone. On their return, it was laid where the stray dog could smell it, and then the company quietly dispersed, each one telling someone else the old man's story, and put in practice, we trust, his admonition, "Be kind to every living creature."—Practical Farmer.

A Birthday Party.

Dear Puck and Beavers.—This is my first letter to the Circle. I am going to write on my birthday party.

I had a party on my birthday. I had a great many at it. Their names were: Doris Hayes, Addie Goldring, Bertha G. Birge, Marjory Goldring, Pearl Goldring, Clara Jackson, Reva Richardson, Annie Parsons, Ida Jones, Irene Howland, Alma Howland, Louisa Bennett, Elson Ashby, Gladys Ashby, Ella Goldring.

I wrote on all the invitation notes, "Come at half-past two," so we could have great fun till tea time.

Mother, Ella and Gladys got the tea ready at six o'clock. There were candies, oranges, nuts, cakes, pies, bread, fruit, and a great many other things which I cannot name.

After supper, I gave each of the girls a little basket, tied with red baby ribbon. Then they went in the hall till I had the peanuts. Then they came out and started to hunt for the peanuts. Whoever found the most got the prize. When we were through our games, father hired the horse, and we all got into the buggy, and when we got outside of the gate we saw Mr. Rogers' automobile coming, so we had to all jump out again. After it went past, we got back into the buggy and rode away laughing. I was ten years old that day. It was my second party. I will close, as I have already taken up too much room.

EUNICE KEMP (Book III.)

Whitby, Ont.

A Creeping Plant.

Dear Puck and Beavers.—Here is a small wild flower that I do not know the name of. There is quite a patch of it back of our house. I have often asked what it was, but no one could tell me. We have pressed weeds at our school twice, but this plant was not taken as a weed. I found it growing in rich, sandy soil. It is very much like a vine. When growing in the shade, it crawls along the ground and grows to a length of thirty-seven inches. That which I found growing in the sun was about twelve inches long, and it grew upwards towards the sky. There are more flowers on the ones growing in the sun than on those growing in the shade. The flowers are about quarter the size of the flowers on a Shamrock. They are purplish colored, with two dark spots on the inside. The larger leaves are about the size of a copper, and some others about the size of a five-cent piece. The leaves grow in couples about an inch and a half apart all along the stem. The flowers grow in between the two leaves. The leaves are scalloped and about the shade of clover, the vines run outwards toward the scallops. The roots grow from edge of the stem. As my drawing does not show the flowers very plain, I will send you a piece I pressed to examine.

HAZEL MUIR

Scarboro, P. O., Ont.

The plant is Ground Ivy, one of the Labiate family. The common catnip, horse mints, peppermints, etc., belong to the same family, hence are "cousins" of your orchard creeper. You have given a very good description, Hazel.

Our Letter Box

Dear Puck,—I have been a reader of the Beaver Circle and enjoy it very much. I never wrote to it before. My dad has taken "The Farmer's Advocate" for a great many years. I live about fourteen miles east of Ottawa, in the County of Russell. Our post office is Navan, Ont.

tried my entrance this summer at Cumberland. Our school is about one mile and a half from our farm; there are two lady teachers. In the summer the attendance is about one hundred.

I have been taking music lessons for quite a while. I have four sisters and two brothers, but there are only three of us at home most of the time. One of my brothers is out West, and the other is taking a great interest in Holstein cattle.

We take a lot of other papers besides "The Farmer's Advocate," but none of them seem as interesting to me.

Our house is situated on a two-hundred-acre farm, with about three acres of lawn in front of it, and a garden behind it. It is made of brick. The name of our farm is Epworth Farm. I hope this letter will escape the w.-p. b. Will some of the Beavers please write to me?

LYDIA MYRTLE McCULLOUGH (Age 13, Book V.)
Napan, P. O., Ont.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle, and I hope it won't discover the waste-paper basket.

Will some of the Beaver Circle girls write to me?

Will some of the Beavers give me a name for our farm?

We have one hundred acres. We have eighteen acres of wheat and sixteen acres of hay, all kinds of trees but bananas and oranges, all kinds of berries, a lot of flowers. There are two houses. One is vacant, and we would like to rent it, meanwhile our neighbor's boys and my two brothers and I play in it. We have lots of fun in it. I like to read the Beaver Circle letters.

THEODORE GRAY (Book III.)
Coldstream, Ont.

Our requests for farm names are not receiving much attention from our Beavers, so Puck had better make a start. Here are a few names: Fairview, Bonnybrae, The Willows, The Maples, The Beeches, The Pines, Stormfield (the name of dear old Mark Twain's summer home), Burnside, Silver Creek, Stonehenge, Lake View, Maple Lodge, Hillcrest, Hillcroft—Now, for some more from the Beavers.

Dear Puck,—One day my brother and I were playing in an old barn when we noticed two young pigeons roosting on a beam. We crept carefully up, and each caught one by the tail. We took them home, but soon one died. The other one stayed with the chickens. We had it for a while, and then it flew off. I hope this will escape the w.-p. b. I will close now, wishing the Beaver Circle every success.

REGGIE PATTERSON (Age 11, Class III.)
Rodney, Ont.

When the little pigeon died, were you not sorry that you had meddled with it, Reggie? It is better not to try to do anything with birds, except with wounded ones, that would die anyway if left to themselves. One can, however, make bird-houses for them, placed on posts with a sheet of tin below, to keep cats from getting up. In a garden in this city, a boy put up a bit of hollow log for a box, and bored a hole through, hoping wrens would find it out. Before two days had passed, a pair of wrens did come to it, and they made their nest in it, and raised a family. Of course, if one makes bird-boxes, one must not be keeping in very often, or the birds will become frightened and go away. If I made a bird-box, I would place a drinking vessel for birds on another post not far off, and put fresh water in it every day.

It is too late to put up boxes now, expecting to have occupants, as the birds will soon have done with nesting for this year, but what about getting a few ready for next spring?

Dear Puck and Beavers,—This is my first letter to the Beaver Circle. Will you ask some of the children please to correspond with me? Will some of the Beavers please give me a name for our farm? There is a creek running through there are a sugar bush, two barns, and two houses. We have an orchard, and a small cedar swamp containing about fifty trees. Will you please tell me how many there are that write to the

WINDSOR DAIRY SALT



The wise housewife knows the importance of always keeping a good supply of Windsor Dairy Salt on hand.

She knows that Windsor Salt makes the best

butter—and she is not satisfied to make any other.

Windsor Dairy Salt is both a money-maker and a money-saver.

It makes money for farmers and dairymen because it makes butter that brings the best prices.

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Circle? I have a flower garden and an onion and tomato garden.

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A Laugh in Church.

She sat on the sliding cushion,
The dear, wee woman of four,
Her feet in their shiny slippers
Hung dangling above the floor.
She meant to be good; she had promised,
And so, with her big, brown eyes,
She stared at the meeting-house windows,
And counted the crawling flies.

She looked far up at the preacher
But she thought of the honey-bees
Droning away in the blossoms
That whitened the cherry trees.
She thought of the broken basket,
Where, curled, in a dusky heap,
Three sleek round puppies, with fringed ears,
Lay snuggled and fast asleep.

Such soft, warm bodies to cuddle,
Such queer little hearts to beat,
Such swift, red tongues to kiss you,
Such sprawling, cushiony feet!
She could feel in her clasping fingers
The touch of the satiny skin,
And a cold, wet nose exploring
The dimples under her chin.

Then a sudden ripple of laughter
Ran over her parted lips,
So swift that she could not catch it
With her rosy finger tips.
The people whispered, "Bless the child!"
As each one waked from a nap,
But the dear, wee woman, hid her face
For shame in her mother's lap.

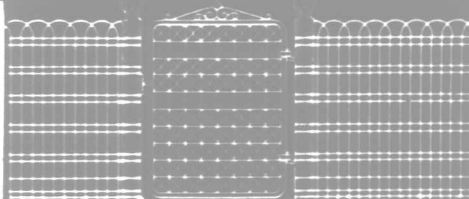
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Ans—A chain on a vessel.

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THE SANWELL HOXIE WIRE FENCE CO., Ltd.
Dept. B, Hamilton, Ont., Winnipeg, Man.



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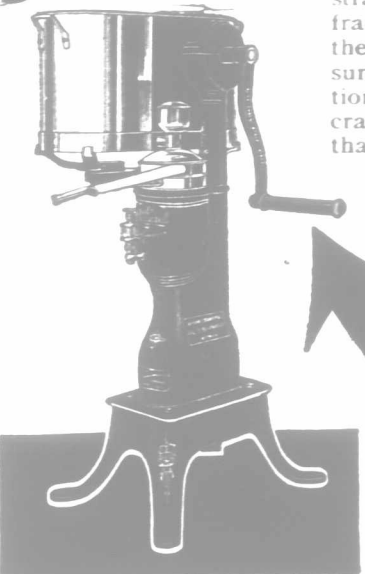
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INTERNATIONAL HARVESTER COMPANY OF AMERICA
(Incorporated) CHICAGO U S A



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It is quite late to put up boxes now, especially if you have occupants, as the birds will have been done with nesting for this season. What about getting a few ready-made boxes?

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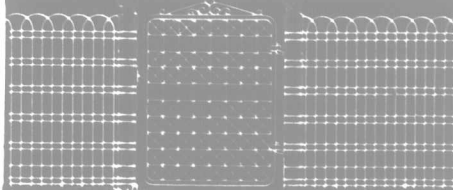
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39

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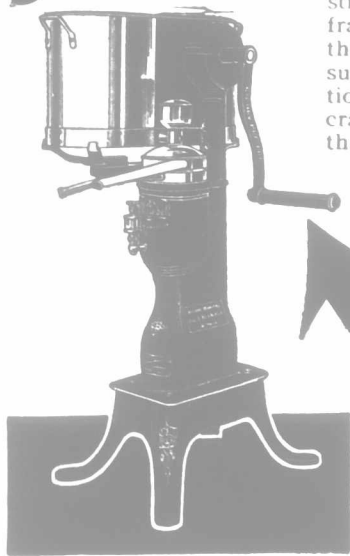
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Let Him Alone

Perhaps some maker or agent of common cream separators is trying to sell you a disk filled or other complicated machine by claiming it is simplest, most efficient, or most



62 disks from one common separator exchanged for Dairy Tubular. The maker calls it simple and easy to clean

durable. Ask him why he makes such claims when everybody knows that

Sharples Dairy Tubular Cream Separators

use neither disks nor other contraptions, yet produce twice the skimming force, skim faster, skim twice as clean, wash easier and wear longer than common machines. If he tries to dispute these facts, ask him to go with you to the nearest Tubular agent and disprove them. If he refuses to go, just let him alone—his machine is not the kind you want.

Tubulars are The World's Best. Sales easily exceed most, if not all, others combined. Probably replace more common separators than any one maker of such machines sells. The manufacture of Tubulars is one of Canada's leading industries. Write for Catalogue No. 193

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TELEGRAPH AND CABLE.

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LADDERS

ONLY A FEW LEFT.

A forty-foot Waggoner Extension Ladder (two lengths of twenty feet). A first-class article, complete with pulley and ropes and wired. **FOR \$8.00.** Estate being wound up quickly. Longer and shorter lengths if desired. Terms cash. Write to-day.

THE CANADA TRUST CO.,
442 Richmond St., London, Ontario.

Angora Goats!

I will sell three pair of choice, thoroughbred, registered Angoras from my recently imported flock. If interested, write me at once, as I will sell no more this year. Address:

C. J. Faul, Sault Ste Marie, Ont.

Holstein Herd-books WANTED

Vols. 2 and 6, Holstein-Friesian Herd-book of Canada. Apply, stating price.

H. L. LOGAN, Brockville, Ont.

The hills are dearest which our childish feet

Have climbed the earliest, and the streams most sweet

Are ever those at which our young lips drank,

Stooped to their waters o'er the grassy bank.

—John Greenleaf Whittier

enough. All Senior Beaver letters that are just lists of horses, cows, dogs, cats, brothers and sisters, go to the Waste-paper Basket—great Moloch that it is!

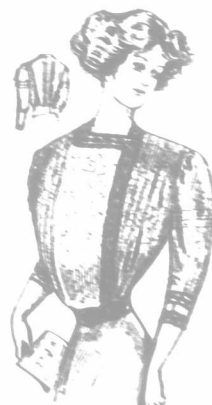
Vera Perdue (age 12, Book IV.), Massie, Ont., would like some of the Beavers to correspond with her.

Myrtle Reaume (Book IV.), Fairplay, Ont., also wishes correspondents.

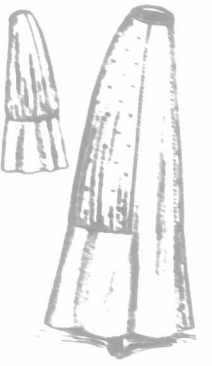
"The Farmer's Advocate" Fashions.



6712 Outing Blouse or Shirt Waist. 34 to 42 bust.



6689 Fancy Tucked Blouse. 34 to 42 bust.



6708 Three-Piece Walking Skirt. 22 to 30 waist.



6709 Boy's Navy Blouse, 6 to 12 years

Please order by number, giving measurement or age, as required. Price ten cents per pattern. Address: Fashion Dept., "The Farmer's Advocate," London, Ont.

Sandy, I don't mean yours, I was in error. I'll send you yours. You've charged me for odd. An error on my part.

Current Events.

John A. Ewan, a leading member of the Toronto Globe editorial staff, died recently.

There are in the City of Montreal alone 11,092 persons employed by the C. P. R.

Rev. Dr. Geo. Young, distinguished as a pioneer Methodist missionary in the Northwest, died at the age of 89 years, in Toronto.

The strike of the G. T. R. trainmen, after fifteen days' continuance, causing great loss and inconvenience to the public, was settled, largely through the intervention of Hon. MacKenzie King, Dominion Minister of Labor.

Thirty-four Ontario Normal School teachers who have obtained second-class certificates, have also secured certificates having successfully completed the course in elementary arts at the O. A. C., Guelph, and forty in elementary horticulture and agriculture.

Dr. H. H. Crippen, charged with wife murder, and his companion, Miss Ethel Clara Leneve, who fled from London, England, to Canada, were arrested on the steamer Montrose on arrival at Father Point. Their presence on the boat was made known to the authorities on land by wireless telegraphy.

The amended accession oath has been passed by the British House of Commons and Lords, and duly signed by King George V. Phrases objectionable to Roman Catholics and Nonconformists were eliminated. Its terms are now as follows: "I do solemnly, sincerely, in the presence of God, profess, testify and declare that I am a faithful Protestant, and that I will, according to the true intent of the enactments to secure the Protestant succession to the Throne of my realm, uphold and maintain said enactments to the best of my power."

Home-made Dyes.

HOW TO MAKE THEM AND HOW TO USE THEM.

By Cordelia Stanwood, in Suburban Life.

Artistic persons are beginning everywhere to awaken to the fact that vegetable colors are softer in tone, more permanent and beautiful, than aniline colors. This revival of interest in vegetable dyes is due, in a certain extent, to wider culture. It is found that the old Japanese prints executed in vegetable colors are more permanent and beautiful than modern works, that old Persian rugs dyed with vegetable stains are priceless.

At one time an attempt was made in the East to use some of the aniline colors. The sad results of that experiment are constantly coming to light. A friend has a number of beautiful Oriental rugs. One day this winter, as they were being shaken, she told the maid to moisten the broom in snow and brush a rug. To her consternation, the next morning, there was a large red spot on the light background of the rug. The red, instead of being a vegetable color, was aniline.

Aniline colors not only "run" and fade, but they fade inharmoniously. For this reason, the Persians have been wise enough to decide in favor of the primitive ways of hand-dyeing. The Government has prohibited the introduction of aniline colors into the country. Only those vegetable colors are used in the making of Persian rugs which remain unchanged with the passage of time, save for an increasing richness in color. They have discovered that, while a vegetable dye will ripen into a deeper tone of itself, a chemical dye will fade, or one of the tones used to make up the composite tone will disappear, leaving the other. For example, a yellow that has been used in combination with blue to form green, may disappear entirely, leaving a blue.

By the loss of the mordant,

one who lived in the country seemed to know how to use vegetable colors; but, of late years, dyeing has become almost a lost art.

A short time ago, a friend loaned me a most delightful old-fashioned recipe book. She is the granddaughter of a country minister, whose salary was two hundred dollars a year. By several charming anecdotes, she testified to the faithfulness with which the recipes in "The Frugal Housewife" were applied by her grandmother.

The following suggestions are from this old book:

Saffron steeped in earthen, and strained, colors a fine straw color. It takes a delicate or deep shade, according to the strength of the tea. The dry, outside skins of onions, steeped in scalding water and strained, color a yellow very much like "bird-of-Paradise color." Peach leaves, or bark scraped from the barberry bush, color a common, bright yellow. In all these cases, a little alum does no harm, and may help to fix the color.

White maple bark makes a good light brown. This should be boiled in water set with alum. The color is reckoned better when boiled in brass, instead of iron. A pail of lye, with a piece of copperas half as big as a hen's egg boiled in it, will color a fine nankeen color, which will never wash out. This is very useful for the lining of bed-quilts, comforters, etc.

A very beautiful nankeen color may likewise be obtained from birch bark, set with alum. The bark should be covered with water, and boiled thoroughly in brass or tin. A bit of alum half as big as a hen's egg is sufficient. If copperas be used instead of alum, slate color will be produced.

Tea-grounds boiled in iron, and set with copperas, makes a very good slate color. Logwood and cider, in iron, set with copperas, makes a good black. Rusty nails, or any rusty iron, boiled in vinegar with a small bit of copperas, makes a good black.

In dyeing, there are three points to be considered: There must be a dyestuff, usually a mordant, and the result must be durable and pleasing.

Everything that possesses color is a dyestuff of greater or lesser strength. Some dyestuffs, such as madder and logwood, will give a permanent stain without a mordant, but most dyes need to be "set." The mordant is a substance that has an affinity for coloring matter. It soaks into the pores of the material to be dyed, and there forms a chemical combination with the coloring matter, that "fixes" or "sets" the color. A color is considered permanent when it will not run when soaked in water, nor fade when it is exposed for weeks to sun and air.

Copperas seems to be the mordant best adapted to brown and tan; alum, cream of tartar and tin crystals to yellow, red and orange; alum, blue vitriol and copperas to green; and cream of tartar, alum and ammonia to violet. Generally speaking, an acid takes an alkali mordant, and an alkali the reverse.

All dyeing should be done in a brass kettle, or an iron kettle lined with enamel. Brass is better, as it is light, easy to handle, and lasts forever. For dyeing half-pound quantities of raphia, a twelve-quart iron kettle, lined with enamel, answers very nicely; but, by the end of a year of constant use, the enamel begins to chip off.

For the first experiment in coloring, it is well to use inexpensive materials. Those that one gathers himself are best, as it is a pleasure to look for them, and adds greatly to one's interest in the subject.

Fill the kettle full of any one of these dyestuffs, alder bark, maple bark, hemlock bark, hemlock boughs, cedar bark, cedar boughs, spruce boughs, pine boughs, pine bark, poplar bark, wild-cherry bark, red sorrel, golden-rod blossoms, St. John's wort, bracken, lady fern, sensitive fern, interrupted fern, yellow-dock leaves, dock roots, buttercup blossoms, lambkill or lambkill leaves (laurel), bark and alder in equal parts. Cover with water and boil thoroughly. Strain the dye carefully, and place in ten or fifteen cups. Use a small amount of the dye and mordant, no definite amount. If a quarter of a teaspoonful of alum in alder and mordant gives a pale yellow, I add a little

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more, to see if that will brighten the color. This rough experiment does not give me proportions, it simply says, "by using the proper amount of alder and alum, one can get a good yellow."

Let us take a specific case: Fill the kettle full of equal parts of alder bark and lambkill. Soak the material, if dry, overnight, and boil a half-hour or more. Strain the liquid and place in cups. To test the color, have ready for each cup a dozen pieces of yarn or raphia, about a foot long. In the first cup use alum; the result is dull yellow. In the second cup, copperas and ammonia, dark slate; third cup, blue vitriol and copperas, dark golden brown; fourth cup, blue vitriol, lighter golden brown; fifth cup, ammonia, tan; sixth cup, tin crystals, orange; seventh cup, copperas, dark brown. Note: If one is going to dye with yarn, test with yarn, as raphia will often give an entirely different color. A tan for yarn will give a yellow for raphia; a gray for yarn will give a tan for raphia, and a dull green for yarn will give a tan for raphia.

So one may continue indefinitely. Boil each of the colors with the yarn in an enameled basin. After the samples are dry, select one piece of yarn from each color, and fasten the rest into groups, to which labels are attached with a note of the dye and mordant used. Finally, bind all the groups into one, as, by the time two or three hundred specimens are collected, it is difficult to pick out a set from the large box full. Now take the single specimen from each group, and wind about the center for about two inches a heavy cord. This protects a certain part from the sun and air. Hang them in the open, sunny window, for six weeks. At the end of that time, remove the cord, and it will be found that, while perhaps ten out of every eleven colors have remained unchanged, one has entirely disappeared. It is convenient to fasten the tested specimens to a large card, for reference to the card will immediately show that it is useless to give the dye and mordant that produced the faded specimen a more careful test.

Having found the possibilities of lambkill and alder, in this general way, with yarn, boil another quantity of lambkill and alder, and to the strained liquid add two ounces of copperas; when the solution boils, put in raphia, and let it steep for thirty minutes or more, according to the depth of color desired. The result is dark brown of a beautiful tone. Another kettle full is mordanted with four ounces of blue vitriol. This gives a golden brown.

Thus, the puzzle of exact proportions is gradually solved, not by one experiment, but by many.

The following notes are worth remembering:

Soak raphia a number of hours before immersing it in a mordant or dye. Have the mordant and dye at boiling point when the raphia is added. Never boil raphia, as boiling seems to cook it and weaken the fibres. Turn the raphia constantly, while steeping, so that the heat and dye can reach all parts constantly, to prevent spotting. Allow the raphia to remain in the mordant a long time, as it seems to take the dye more evenly. When dyed raphia is thoroughly dry, it is best to wash it in warm water, to remove the loose dye and mordant.

Wear rubber gloves when removing the material from the dye. Allow eight quarts of water to each recipe. Here are a few recipes:

Light Red.—Six ounces of cochineal, one-half pound of logwood, one-fourth pound of fustic, six ounces of tin crystals, one ounce of cream of tartar. Place the dye and mordant in the same bath, and boil two hours. Let the raphia simmer in the dye two hours.

Dark Red.—One-half pound of fustic, one pound of cochineal, one pound of logwood, boil two hours. The raphia should be previously mordanted as follows: Place the raphia in a boiling solution of two ounces of alum and five ounces of cream of tartar. Let it stand one or two days. Drain the raphia and place in the cochineal dye. Remove when the desired color is obtained.

Orange.—One pound of madder, one-half

pound of fustic. Boil the dye one-half hour. Mordant as in recipe No. 2.

Darker Orange.—One pound madder, one-eighth pound of logwood, one-half pound of fustic. Boil two hours. Mordant as in recipe No. 2.

Yellow.—Powdered yellow dock-root gives a permanent yellow. Mordant with alum.

Buff.—Annatto, or other otter, set with either washing soda or alum, gives tones of yellow and buff.

Brown.—Steep raphia for two hours in a boiling solution of four ounces of copperas and water.

Green.—Different tones of green may be obtained by dipping raphia, dyed with yellow-dock root, in indigo blue for a greater or shorter length of time. Sensitive fern gathered in June or July, set with four ounces of blue vitriol, gives a pleasing green.

Blue.—Indigo gives the best blue. The method of using indigo is described in a recipe book written by Chase.

Violet.—One pound of logwood, four ounces of cochineal set with alum, gives a red violet.

Children's Essays on Live Stock.

Some of the ideas propounded by child essayists in the competition organized by the Royal Agricultural Society at Liverpool, are of a decidedly humorous turn. The more humorous of the papers submitted by youthful competitors was posted up in a special tent in the Liverpool show-yard, and a few of the extracts commonly known as "howlers," we print below:

"The dog can soften the hardest bone with its hot breath, and make it valuable for eating."

"Some of the cow's food turns to milk and the rest to blood."

"The calves give us condensed milk."

"The pig gives us saucages."

"Pigs do not fly like birds do. Shall I tell you why? Because they have got no wings."

"The farmers have to be very careful because the hawks suck the goats' milk."

"The pig's stomach is often made into bag-pipes."

"They (the cows) have got horns to catch sheep."

"The red-skinned cows give us the best milk."

"In foreign countries they (the cows) are also used for pulling cannons, and when they do not go elephants hit them with their trunks."

"We might think it fine to be a cow, but it isn't."

"If a pig was thrown into water it would float easily."

"The best horses are funeral horses and carriage horses next, and then comes the marriage horses."

"The appearance of the horse is very much like an elephant."

"The way they kill young pigs is they get hold of their front feet and twist them round and cut their throat."

"A horse should be kept clean from insects and worms, which often walk on them and annoy them."

"The cock, if familiar with the stars, is able by crowing to tell men what time of day it is."

"The cow, like the human being, brings forth children, and with them they are very precious."

"The horse is as tall as a middle-aged man."

"The baby horse is called a fillet."

"Sometimes the mother hens have chickens to take care of them."

"The hen takes a long time to lay an egg."

"When six months the cock becomes its own master, and his power remains unlimited until he reaches the age of three years; then if any other gentleman younger than he comes along he will find his wives deserting him to go to the other, and all he can do is to look on quietly and submit."

"One may see huge sides of beef in a butcher's shop that were once the property of cows."

"Animals as well as human beings are divided into sets."

"The dogs find the unfortunate creatures that intercept the laden messengers of death that rush through the air singing their own death cries."

Steel Shoe Wearers

Are Saving BARRELS of MONEY!
GRAND TO EVERY READER OF THIS PAPER OFFER

We offer to send you a pair of Steel Shoes for FREE EXAMINATION, on deposit of the price, and let **the shoes themselves** tell you their story of comfort, lightness, neatness, strength and wonderful economy. They will tell you more in **five minutes** than we could on a page of this paper. If they don't convince you **Instantly, DON'T KEEP THEM!** Notify us to send for them at our expense, and every penny of your money will be returned without delay or argument.

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.

Corrugated Steel Soles!

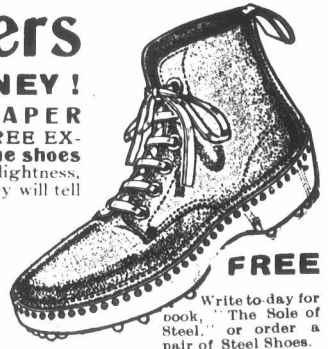
The bottoms are corrugated, making them **100 per cent stronger** than before, and are studded with adjustable Steel Rivets, that take the wear and give a firm foothold. When Rivets are partly worn, replace them with new ones, by hand, yourself, making shoes as good as new. 50 Extra Rivets cost 30 cents, and should keep shoes in repair for two years at least.

Stronger! Lighter! Better! Many Times More Durable.

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 seams!**

SEND NOW! Don't put it off! Simply remit price and get a pair for **FREE EXAMINATION** at our risk. Be careful to give correct size of shoe. Then if you don't say **at once** that they are the grandest work shoes you ever put on your feet, notify us at once to send for them at our expense, and we will promptly refund your money. (45)

N. M. Ruthstein, Sec. and Treas. Steel Shoe Co., Dept. 453, Toronto, Canada.
Main Factory: Racine, Wis. Great Britain Factory: Northampton, England.



FREE

Write to day for
The Sole of
Steel... or order a
pair of Steel Shoes.

Hair Cushion Insoles and springy soles make Steel Shoes so easy, warm, dry and comfortable that you will not be troubled with corns, callouses and blisters or suffer from colds and rheumatism.

FOR MEN Sizes 5 to 12, Black or Tan.
Note special low introductory prices
Steel Shoes, 6 inches high, \$2.50 per pair.
Steel Shoes, 6 inches high, better grade of leather, \$3.00 per pair.

Steel Shoes, 6 inches high, extra grade of leather, black or tan color, \$3.50 per pair.
Steel Shoes, 9 inches high, \$4.00 per pair.

Steel Shoes, 9 inches high, extra grade of leather, black or tan color, \$5.00 per pair.
Steel Shoes, 12 inches high, extra grade of leather, black or tan color, \$6.00 per pair.

Steel Shoes, 16 inches high, extra grade of leather, black or tan color, \$7.00 per pair.

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.

Save buying several pairs of boys' shoes a year. **One pair of Steel Shoes will do it!**

HANDLING THE CORN CROP

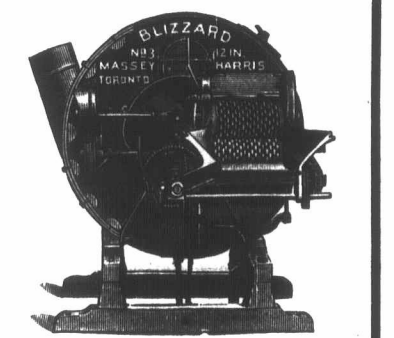
IS EASY IF YOU HAVE THE
PROPER IMPLEMENTS—
AND HERE THEY ARE.

Massey - Harris Corn Binder

Cuts tall or short corn, standing or down, and binds it securely into neat, easily-handled sheaves.

Adjustable to cut from three to eighteen inches from the ground, and can be levelled when working on a hillside.

Easy on the horses, and easy on the driver.



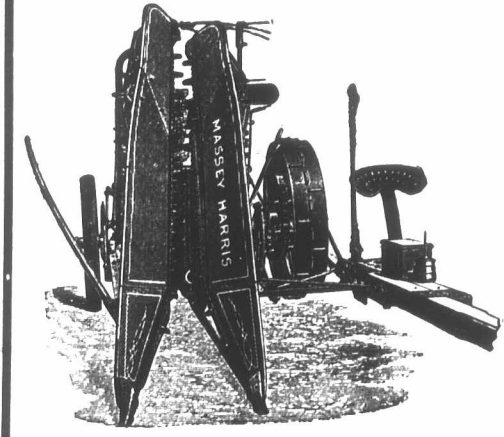
Massey-Harris Blizzard Ensilage Cutter and Shredder

Has great capacity, and is adjustable to cut from 1/4 to 1/2 inch long.

Blower has ample power to elevate the ensilage.

The travelling table and spring-controlled feed rolls provide a positive feed, and, as the rolls may be instantly stopped or reversed, it is the safest cutter you can use.

Furnished with a transport truck when ordered.



Massey-Harris Co., Limited

Toronto Montreal Moncton Winnipeg Regina Saskatoon Calgary

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

"The men who own horses are nearly always bad-tempered individuals."
"The male hen is called a cock."
"The pig, like all other quadrupeds, has four legs."
"Of course, everybody has heard of the dog. For the benefit of those who have not, it is a quadruped."
"The sow is more useful than the boar when dead. Its feet are useful to chip shops, as trotters, in a pork shop its cheeks are sold as pig cheeks, they sell

its stomach as pig's belly."
"Dogs have helped to form our English literature."
"The skin of the cow makes the best beef tea."—Farmer and Stockbreeder.
NOT SERIOUS.
She—So your grandfather lived to be over a hundred, Thomas? What did he eventually die of?
Thomas—I don't quite remember, miss, but 'twas nothing very serious.

SUCCESS-MANURE-SPREADERS

are made right here in Canada

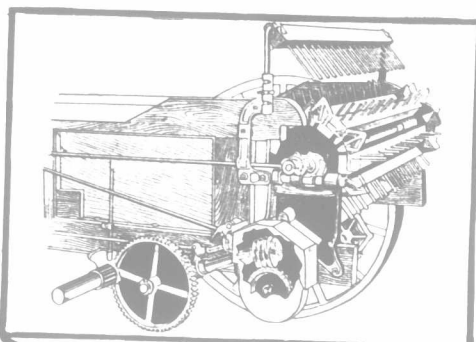
Need you guess twice about the motive?—when anyone tells you that the up-to-date manure spreader—the aptly-named SUCCESS—is no longer made in Canada. Just you investigate. Just write the Dain people. Do that before you put a dollar into any manure-spreader investment.

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.

The Housewife and the Fly.

By Adalena F. Dyer.

"Don't come into my parlor," said the Housewife to the Fly;
"There's a screen at every window, and your entrance I defy.
There are microbes in your footsteps and a crust upon your head,
Which, if not so microscopic, would fill our hearts with dread.

"You carry germs of typhoid and spread consumption's bane,
And our sanitary teachers paint your crimes in language plain.
Don't come into my parlor; and for safety I would pray,
If you walked into my dining-room upon some sunny day.

"There are seeds of vile distempers hidden in your tiny wings,
And your many feet have travelled over countless filthy things.
You're a menace to our safety, you are powerful though small,
And the mischief you accomplish would the bravest heart appal.

"If you enter, I have poison all prepared for you to eat,
And paper spread to tangle your germ-laden wings and feet.
I will poison, trap or smash you, if you do not leave my door;
For our modern sanitation will endure your calls no more."

—Good Housekeeping Magazine.

TRADE TOPIC.

THE WESTERN FAIR.

There will be many new and novel features at the Exhibition this year, one of which will be a competition for the best dairyman's outfit, consisting of horse, harness, delivery wagon, etc. Through the kindness of Dr. C. S. Tamblin, V. S., the Association are offering \$100 in prizes for this event. The money is divided into four prizes, so that all may have a chance. An entry must be made for it with the Secretary, in the usual way, and the judging will take place on Tuesday, September 13, at 1:30 p. m., before the grand stand. This should be of practical benefit, as it will be an inducement to the milkmen to keep their rigs in good condition. Any person wanting a prize list or any other advertising matter, apply to the Secretary.

For four successive nights the hotel man had watched his fair, timid guest fill her pitcher at the water cooler.

"Madam," he said on the fifth night, "if you would ring, this would be done for you."

"But where is my bell?" asked the lady.

"The bell is beside your bed," replied the proprietor.

"That the bell?" she exclaimed. "Why, the boy told me that was the fire alarm, and that I wasn't to touch it on any account." Success Magazine.

A quiet, bashful sort of a young fellow was making a call on a girl one evening not so very long ago, when her father came into the parlor with his watch in his hand. It was about 9:30 o'clock. At the moment the young man was standing on a chair straightening a picture over the piano. The girl had asked him to fix it. As he turned, the old gentleman, a gruff, stout fellow, said: "Young man, do you know what time it is?" The bashful youth got off the chair nervously. "Yes, sir," he replied. "I was just going." He went into the hall without any delay, and took his hat and coat. The girl's father followed him. As the caller reached for the door-knob, the old gentleman again asked him if he knew what time it was. "Yes, sir," was the youth's reply. "Good night!" And he left without waiting to put his coat on. After the door had closed, the old gentleman turned to the girl. "What's the matter with that fellow?" he asked. "My watch ran down this afternoon and I wanted him to tell me the time, so that I could set it."

The God of the Open Air.

Thou who hast set Thy dwelling fair
With flowers beneath, above with starry lights,
And set Thy altars everywhere,—
On mountain heights,
In woodland valleys dim with many a dream,
In valleys bright with springs,
And in the curving capes of every stream,—
Thou who hast taken to Thyself the wings
Of morning, to abide
Upon the secret places of the sea
And on fair islands, where the tide
Visits the beauty of untrodden shores,
Waiting for worshipers to come to Thee
In Thy great out-of-doors,—
To Thee I turn, to Thee I make my prayer,
God of the open air!

From the prison of anxious thoughts that greed has builded,
From the fetters that envy has wrought,
and pride has gilded,
From the noise of the crowded ways and the fierce confusion,
From the folly that wastes its days in a world of illusion
(Ah, but the life is lost that frets and languishes there),
I would escape and be free in the joy of the open air.

No let me keep
These treasures of the humble heart
In true possession, owing them by love,
And, when at last I can no longer move
Among them freely, but must part
From the green fields and from the water clear,
Let me not creep
Into some darkened room and hide
From all that makes the world so bright and dear,
But throw the windows wide
To welcome in the light,
And, while I clasp a well-beloved hand,
Let me once more have sight
Of the deep sky and the far-smiling land—
Then gently fall on sleep,
And breathe my body back to nature's care,
My spirit out to Thee,
God of the open air.

—Henry Van Dyke, in Century Magazine.

A Summericycle.

A boat and a beach and a summer resort,
A man and a maid and a moon,
Soft and sweet nothings and then at the real
Psychological moment a spoon.
A whisper, a promise, and summer is o'er,
And they part in hysteric despair.
But neither returns in the following June,
For fear that the other is there.)

—Lippincott's Magazine.

A Woman's Answer.

(Sent by a subscriber.)

Do you know you have asked for the costliest thing
Ever made by the hand above,—
A woman's heart, and a woman's life,
And a woman's wonderful love?

Do you know you have asked for this priceless thing,
As a child might ask for a toy,
Demanding what others have died to win,
With the reckless dash of a boy?

You have written my lesson of duty out—
Manlike you have questioned me—
Now stand at the bar of my woman's soul,
Until I shall question thee.

You require your mutton shall always be hot,
Your socks and your shirts be whole,
I require your heart to be true as God's stars,
And as pure as is heaven your soul.

You require a cook for your mutton and beef,
I require a much greater thing,
A seamstress you're wanting for the socks and the shirts;
I for a man and a king.

A king for the beautiful realm called home,
And a man that his Maker, God,
Shall look upon as He did on the first,
And say, "It is very good!"

I am fair and young, but the rose will fade,
From my soft young cheek one day,
Will you love me then, 'mid the falling leaves,
As you did 'mid the blossoms of May?

Is your heart an ocean so strong and deep,
I may lough my all on its tide?
A loving woman finds heaven or hell,
The day she becomes a bride.

I require all things that are grand and true,
All things that a man should be,
If you give all this, I would stake my life,
To be all you demand of me.

If you cannot be this, a laundress and cook,
You can hire, and little to pay,
But a woman's heart and a woman's life,
Are not to be won that way.

The Girl: What's your opinion of women who imitate men?

The Man: They're idiots.

The Girl: Then the imitation is a success, isn't it?

—Lippincott's Magazine.



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and Pet Stock.
TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 60 cents.

AGENTS WANTED—Smart, active ladies to take orders in country districts for our famous Made-to-order Corsets and Skirts. Good commission. Apply: Robinson Corset & Costume Co., London, Ontario.

FOR SALE—Iron, Pipe, Pulleys, Belting, Rails, Chain, Wire Fencing, Iron Posts, etc.; all sizes very cheap. Send for list stating what you need. Agents wanted, good commission. The Imperial Waste & Metal Co., Queen St., Montreal.

GENERAL AGENTS WANTED—We want one or two good reliable men to organize a territory in Ontario. We sell principally to General Stores, Implement Dealers and Local Agents, etc. The right man can make big money. References required. Address reply: The Acme Steel Ladder Co., P. O. Box 366, Worcester, Mass.

VANCOUVER ISLAND offers sunshiny, mild climate; good profits for ambitious men with small capital in business, professions, fruit-growing, poultry, farming, manufacturing, lands, timber, mining, railroads, navigation, fisheries, new towns; no thunder storms; no mosquitoes; no malaria. For authentic information, free booklets, write Vancouver Island Development League, Room A, 102 Broughton St., Victoria, B.C.

WANTED—Good farm hand, single. W. C. Good, Brantford.

78 ACRES—Adjoining Myrtle; good clay loam; 14 acres of orchard; good water; comfortable frame dwelling; barns, driveway and pigpen in good repair; G. T. R. station across road; near churches, school and office; easy terms. Apply Mrs. R. G. Redson, Pickering, Ontario.



ANCONA Cockerels, Single-comb White Leg-horn hens and cocks, yearlings. Cheap to clear. Write your wants, E. C. Apps, Box 224, Vice-President International Ancona Club, Brantford, Ontario.

WANTED—A few private farmers to ship me Poultry, Eggs, Dairy Butter, Syrup, and all other farm produce. Will pay highest market price. W. J. Falle, Prince Albert Ave., Westmount, Montreal.

There came to the home of a negro in Tennessee an addition to the family in the shape of triplets. The proud father hailed the first man who came along the road and asked him in to see them. The man, who was an Irishman, seemed greatly interested in the infants as he looked them over, lying in a row before him.

"What does yo' think?" asked the parent.

"Waul"—pointing to the one in the middle—"I think I'd save that one."

A Prairie Fire.

By Audubon, the Naturalist.

After toiling for an hour, through a wide bottom of tall weeds and matted grass, I reached the grove, erected a small shed of boughs after the manner of the Indians, and, lying down, was soon asleep before a huge fire, which I built against the trunk of a fallen tree. I was awakened by the increasing violence of the gale. At times it sank into low waitings, and then would swell again, howling and whistling through the trees. After sitting by the fire for a short time, I again threw myself upon my pallet of dried grass, but could not sleep. There was something dismal and thrilling in the sound of the wind. At times wild voices seemed shrieking through the woodland. It was in vain that I closed my eyes; a kind of superstitious feeling came over me, and, though I saw nothing, my ears drank in every sound. I gazed around in every direction, and sat with my hand on my gun-trigger, for my feelings were so wrought up that I momentarily expected to see an armed Indian start from behind each bush. At last I rose up and sat by the fire. Suddenly a swift gust swept through the grove, and whirled off sparks and cinders in every direction. In an instant fifty little fires shot their forked tongues in the air, and seemed to flicker with a momentary struggle for existence. There was scarcely time to note their birth before they were creeping up in a tall, tapering blaze, and leaping lightly along the tops of the scattered clumps of dry grass. In another moment they leaped forward into the prairie, and a waving line of brilliant flame quivered high up in the dark atmosphere.

Another gust came rushing along the ravine. It was announced by a distant moan, as it came nearer a cloud of dry leaves filled the air, the slender shrubs and saplings bent like weeds, dry branches snapped and crackled. The lofty forest trees withered and creaked and groaned. The next instant the furious blast reached the flaming prairie. Myriads and myriads of bright embers were flung wildly in the air, flakes of blazing grass whirled like meteors through the sky. The flame spread into a vast sheet that swept over the prairie, bending forward, illumining the black waste which it had passed, and shedding a red light far down the deep vistas of the forest, though all beyond the blaze was of a pitchy blackness. The roaring flames drowned even the howling of the wind. At each succeeding blast they threw long pyramidal streams upwards in the black sky, then flared horizontally and seemed to bound forward, lighting at each bound a new conflagration. Leap succeeded leap, the flames rushed on with a race-horse speed. The noise sounded like the roar of a stormy ocean, and the wild tumultuous billows of the flame were tossed about like a sea of fire. Directly in their course, and some distance out in the prairie, stood a large grove of oaks—the dry leaves still clinging to the branches. There was a red glare thrown upon them from the blazing flood. A moment passed, and a black smoke oozed from the nearest tree—the blaze roared among their branches, and shot up for one hundred feet in the air, waving as if in triumph. The effect was transient. In a moment had the fire swept through a grove covering several acres. It sank again into the prairie, leaving the limbs of every tree scathed and scorched to an inky blackness, and shining with a bright crimson light between their branches. In this way the light conflagration swept over the landscape, every hill seemed to burn its own funeral pyre, and the scorching heat licked every blade in the hollows. A dark cloud of grey smoke, filled with burning embers, spread over the course of the flames, occasionally forming not ungraceful columns, which were almost instantly shattered by the wind, and driven in a thousand different directions.

For several hours the blaze continued to rage, and the whole horizon became girdled with a belt of living fire. As the circles extended the flames appeared smaller and smaller, until they looked like a slight golden thread drawn around the hills. At length then must have been nearly ten miles distant. At length the blaze disappeared, although the purple light that it had illumined the night sky

told that the element was extending into other regions of the prairies.

It was sunrise when I rose from my resting-place and resumed my journey. What a change! All was waste. The sun had set upon a prairie still clothed in its natural garb of herbage. It rose upon a scene of desolation. Not a single weed—not a blade of grass was left. The tall grove, which at sunset was covered with withered foliage, now spread a labyrinth of scorched and naked branches, the very type of ruin. A thin covering of gray ashes was sprinkled upon the ground beneath, and several large dead trees, whose dried branches had caught and nourished the flame, were still blazing or sending up long spires of smoke.

An Automobile Disclosure

By Sophie Swett.

"Some one must tell her that unless she stops putting on airs and talking continually about herself we can't have her!" said the president positively. She pushed back her pompadour, and looked weary and worn as she said this.

The president was Elizabeth Millin, a girl with a finely-developed social instinct, as well as a thirst for knowledge—a somewhat uncommon combination, and one that gave her great influence at the Brithwood Collegiate School for Young Ladies.

"It's a wonder that she condescends to wish to belong to a club," said Sylvia Crombie, her bright blue eyes as round as O's. "It must have been the ridiculous name that attracted her. I almost wish we hadn't called ourselves the 'Upper Tens.'"

"Every one knows that it's just for fun, and because we mean to be frivolous and as unlike the Blue Stocking Club as possible," said Perley French, who wore glasses and had a wrinkled, responsible, high forehead, and really cared more for a good time than anything else. "But that girl—why, she would spoil everything!"

"Sh! Sh!" murmured the president, for "that girl" had just gone out of the Eloyd girls' sitting-room, where the new club was holding a preparatory conference.

But she was not within hearing, for she had gone straight down-stairs and away—she was a day-pupil—her red head carried even higher than its wont, and an aggressive mouth pursed even more aggressively than usual. There was color, too, in her ordinarily pale face. She had expected the Upper Tens to be delighted, and they were not!

They had said that her application would be considered along with the others.

"It would do her good to hear. It would save some one the trouble of telling her," said Sylvia, almost savagely.

"Why can't we simply blackball her and be done with it?" said fastidious Sarah Endicott.

"Because when we planned a club simply for good times we agreed that it shouldn't give any one a bad time, and that it should help people if we could make it," said the president.

"A lot of it will help people if we let Bland Foyle get into it!" exclaimed Sylvia sharply. "She only wants an audience to hear about mamma's tapestries and mamma's point-lace, and how mamma's wonderful taste decorated rooms in barracks-y places. I believe her father was an army officer, though you can't tell!"

"O, Sylvia!" murmured a reproachful chorus.

"You know we all thought the Foyles were adventurers, at first," said Sylvia stoutly. "She talked so much as if she were pretending something! She kept saying that she was about to come out when they left Baltimore, when she was a perfect little savage, and her aunt had

told Dr. Pettingill, when Bland had that nervous fever, that what ailed the girl was isolation; her mother was so queer they had never known a soul!"

"It doesn't seem as if she could ever have gone to school or had a governess, either," said the president, reflectively.

"She's at least a century behind the times."

"A century—she's medieval!" said Sylvia. "If she has read a book, it's some commonplace, old-fashioned thing; and she begins at the beginning and tells it to you, almost word for word, and you can't get a word in edgewise—"

"Hard for you, Syl!" laughed Minna Gage.

"I know I like to talk," said Sylvia, with a deepened flush, "but I hope I know enough to talk about mutually interesting things, and not to think that Sylvia Crombie and her small doings can fill anybody's universe!"

"You've had a better chance, Sylvia," said Alice Towne quietly. "I've heard that an idea of self-importance grows immensely in isolation."

"Yes, and she has an intense desire for the social position that she has never had," said the president meditatively. "I read in a clever book the other day that social position was like the nose on your face; if it's there, you never think of it; but if it isn't!"

"And her talk of her work in the Mission School fits in so queerly with this continual suggestion of social smartness!" Sylvia broke in again. "There's a kind of mystic, mediæval pietism about her that you can't call religion."

"O, Sylvia, don't let's judge about these things," said Rhoda Norcross earnestly. Rhoda was not a girl who was ever thought to be religious herself, either.

"Well, there was the time she just posed for us to see the children hang around her and hug her at the Mission School. She talks all the time of how much they think of her. And—I'll own I can't see anything good about that girl—you know it was she who got Miss Wentworth discharged because she presumed to correct her essay in a way she didn't like. Miss Wentworth did make blunders, and it was trying, but the rest of us bore it because Miss Wentworth had her old father and mother to support, and was all worn out. There's no sentiment about Miss Bland Foyle except sentiment for herself."

"Sylvia, dear, you are bitter," said the president, softly.

"But isn't it true?" demanded Sylvia. And every head in the room was nodded, more or less emphatically. "And she doesn't come up here to the school except in recitation hours. If you were a day-pupil, too, like me, and lived on the next street, and had her coming to see you continually, to talk and talk! You know our living-room is large, and in one corner my sister Ethelinda goes to sleep, and wakes again, with Bland's talk still going on and on, and Aunt Rebecca slips out, and tells me afterwards that she feels as if she had been under the town-pump. And with all the pettiness and vanity and false pretension that forces you to despise her, she has taken lately to being instructive, has a little air of preaching. And I wouldn't bear it, only I've been so afraid I should fairly blaze out at her. You know if you have a temper it makes you meek, in a way—"

"We never thought you were suffering from that quality, Syl!" came in a giggle from the girls.

But Syl had defenders.

"I know just what you mean!" said Ruth Lovejoy. "One does bear for fear of letting one's self go too far! And I don't think the Upper Tens ought to let themselves be handicapped at the start by a girl who at the best is an insufferable bore. Let's blackball her and be done with it, as Sarah says."

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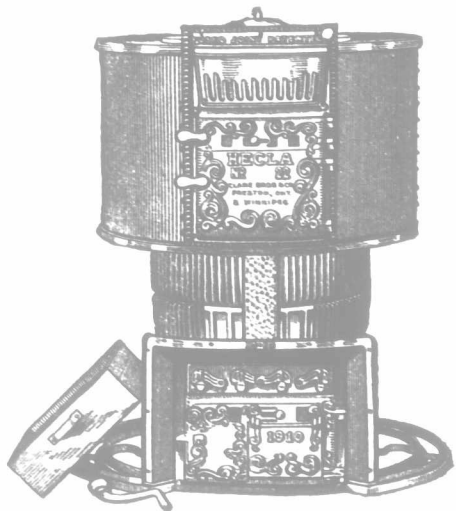
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WHEN WRITING ADVERTISERS MENTION THE FARMER'S ADVOCATE

"I say give her a chance," said Rhoda Norcross quickly.

Rhoda never despaired of anyone. She said it was because she "realized herself."

"We'll put it to vote," said the president.

The vote showed a majority of three in favor of giving Bland Foyle a chance.

"Then," said the president, "some one must delicately but firmly make her understand that a club is not an institution for the glorification of one, but for the sharing of ideas and experiences and good times."

"There's only one way—to draw lots!" said Perley French. "That leaves the matter to Providence in a way, and you do feel the need of a special providence if you're going to try to help Bland Foyle?"

There was a dead, apprehensive silence as the secretary prepared a little bunch of slips of paper, one for each member of the club. On one paper, Alice Clay, the artist of the club, had hastily sketched a head; any one would have recognized Bland Foyle's head, tousled pompadour, aggressive mouth, and "tip-tilted" nose.

The girl who drew the sketch from the papers in the secretary's hand must perform the unpleasant duty of telling Miss Bland Foyle "delicately" that her ego must be subdued before she could become one of the Upper Tenners.

There was a hush in the room as breathless as if the fate of nations depended upon the drawing. Everyone except those girls themselves was hoping that the lot would fall to Alice Towne or Rhoda Norcross, or to the president, whose social tact was unquestionable.

Sylvia was the fourth to draw, and after she had drawn proceedings came to an end, for the strip of paper with the sketch upon it was in her hand.

Sylvia of all girls! Some of the club looked simply relieved; some laughed; some looked deeply troubled; there are always such varieties of human nature to be found where there are fourteen girls.

It was always understood that the drawing of lots was a finality. The girl chosen by destiny must not even complain. But there was blank dismay upon Sylvia's face, and tears rushed to her eyes.

"I can't make her understand; she sees things so differently from other people," she faltered.

"And she has exasperated me so that I can't be sympathetic. You can't be sympathetic when you feel superior, and I can't help feeling superior to Bland Foyle."

"And the lot did fall on Jon-iah; O Lord, send me light!"

Minna Gage sang, with only half-mocking fervor.

"I know you won't hurt her any more than you can help, Sylv," said the president more cheerfully than she felt. She wished that the lot had fallen to almost any girl rather than to Sylvia—down-right, outspoken Sylvia, with her hatred of sham.

Towardly she echoed Sarah Endicott's assertion: "It's as bad or as good as blackballing her to have Sylvia for an emissary. This club will never be bothered with her."

Sylvia procrastinated, a very unusual thing for her. It was within a day of the next weekly meeting of the club when she set out in the late afternoon for the pretentious, old-fashioned house, with uncarved porches, once elaborate grounds, where Bland Foyle lived with her aunt.

Bland had gone out on an errand to the village, and Sylvia overtook and walked along with her.

"I'm Eric's messenger from the Upper Ten Club," Sylvia said, plunging in desperately. "They—"

"I hope they understand that I never form intimacies," interrupted the other girl quickly. "I've just had a letter from an old friend who adored mamma so much. My sister is a great beauty, too. I think she is the most beautiful creature I ever saw except her own child."

Sylvia had been, several times a photograph of the most commonplace little woman, with a plain, plain than Bland, with a very slight, but large-eyed little girl. "I can't see any objection to people, I hope the girls will be kind."

I went to see some people who used to live next door to us. The woman was an invalid, and I wanted to help her. But it was hard for me. I think they only cared for me because of my social position. Whether the pitcher goes to the stone or the stone to the pitcher it is always the pitcher that suffers. But my mission children are dear! I do so love children!"

"Does she?" or is it only a pose like the rest?" reflected Sylvia, while the weak chatter went on and on.

Two or three times Sylvia made a futile effort to stem the ceaseless tide of vainglorious talk. How was one to tell this self-satisfied little being that the girls could not fellowship her unless she reformed?

Sylvia observed, half-absently, a small colored boy with a little hand-cart in the middle of the street. He was apparently carrying home a weekly washing, and had perched his sister, a nite of happy humanity, upon the bundle in the cart. Dashing around the corner came an automobile, which the boy, his back turned for the moment, did not see.

Sylvia and the other woman screamed. Bland Foyle dashed into the street, thrust the dazed boy and the cart out of the way, and was knocked down by the automobile.

In scarcely more than a breathing-space it had all happened. The frightened, crying children picked themselves up unharmed, a crowd collected, as if out of space, as crowds will do, and Bland was taken up unconscious.

Sylvia went with her in the ambulance that carried her home. Her aunt was a collapsing woman, and Sylvia sent word to her own home, and stayed with Bland.

The doctors were grave over a fracture of the thigh-bone. She would be lamed for life.

"Don't—don't cry! I'm so glad I saved the children!" she said, looking wistfully into Sylvia's face. The operation was over, and she had come to herself, weak and white and peaceful. "It didn't cost too much to save them, do you think it did? I'm small, anyway. I've heard the girls say so. But perhaps small things go when great things come; some philosophers say that. I know that if you girls do think I'm ignorant and uncultivated—O, yes, you do! I—I've had hard things in my life—more than you know. Sometimes people—proud people—try too hard not to show that, and—make mistakes. Mamma was—a very poor girl when she married papa, and she wouldn't let herself be put down by papa's mother; she just determined to be like—like what grand-mamma was, and more—more exclusive. It was pretty hard sometimes, but we never never let ourselves drop out and do things like poor people. By myself—well, I think I might have cared only for children and to live simply. But I've done as I was brought up."

"Then you were brought up to be brave?" interrupted Sylvia, for the doctor had said the patient must not talk.

"May I bring the girls to see you? And I know they'll—they'll wish you to do us the honor of joining the club."

Sylvia's voice shook with feeling.

The old, disagreeable, aggressive look came around the girl's mouth.

"I don't know about the club. I don't care to form intimacies," she began. Then suddenly she looked into Sylvia's tear-wet face, and her own changed, softening wonderfully. "Ask the girls to come," she said gently. "But I don't want their feelings to be hurt; tell them I shan't mind the cruelties at all."

From her full heart Sylvia poured out the story upon the Upper Ten Club.

For a while not a girl spoke. Then Sarah Endicott was heard to murmur: "Human nature is very complex."

"Mine doesn't seem to be so," said Sylvia, shortly. "I was simply a coward! It didn't even occur to me to do anything while she risked her life. And the first impulse wasn't all; she is so strong and brave now. I don't believe there is one of us—not one—who would bear being crippled as she is hearing it."

"I think we'd better vote to admit her without conditions," said the president dryly, "and maybe we'd better not have 'Notless, oddige' for the club motto, after all. How would it do to have 'To understand is to forgive'?" Christian L. Lewis's Word.



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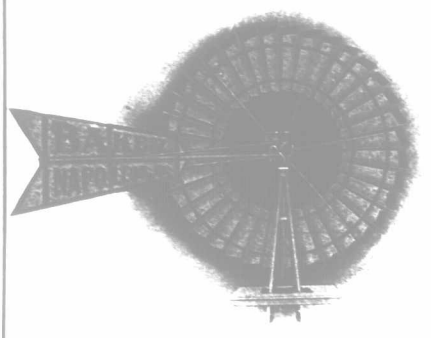
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QUESTIONS AND ANSWERS. Miscellaneous.

THICKENING IN HOCK.

I have a Chesdale mare three years old. Since she went out to pasture, there has been a hock, or opening, on the front of the hock. It was hard to heal; she kept niting it. It is healed now, but a thickening of the skin remains. Please state what will reduce it. R. S. Simcoe Co., Ont.

Ans.—The thickening can be reduced usually by rubbing a little of the following liniment well in, once daily, viz: 4 drams each of iodine and iodide of potassium, mixed with 4 ounces each of alcohol and glycerine. If this does not accomplish result desired, blistering may be practiced.

SALE UNDER MORTGAGE—EXEMPTION OF HOMESTEADS.

1. What is the time required by Ontario law between service of notice of exercising power of sale in a mortgage and the actual sale?
2. Does the same law apply to house property in a town or village?
3. Can an "unpatented" farm in Ontario be seized for debt other than taxes?
4. Is it true that a farm in Ontario cannot be seized for debt (except under mortgage, of course) for twenty years after patent issues?

Ontario. NORTHERNER.

- Ans.—1. At least two months.
2. Yes.
3. No; that is, of course, assuming that reference is intended to be made to lands located under "The Free Grants and Homesteads Act," R. S. O., 1897, ch. 29.
4. Yes; the same assumption being made as in answer to (3).

ALFALFA FOR SEED.

1. When is alfalfa ready to cut for seed?
2. Which is more profitable, hay or seed?

Elgin Co., Ont.
Ans.—1. It is probably best to cut the second crop for seed. The hay should be cut when most of the pods are dark brown, when most of the seeds are hard, but not ripe enough to shell. Some cut with the self-binder, claiming thereby to save about 20 per cent. more seed than when a mower is used.

2. The seed yield is all the way from one to thirteen bushels per acre, but the average good crop runs probably between three and five bushels, while most yields would be below rather than above these amounts. Seed-making is so variable a proposition that it is hard to express an accurate opinion upon it. It is more exhaustive to the land than haymaking, and by some is thought to lessen the stand.

REMODELING STABLE.

I am remodeling my stable this summer, and putting in a cement wall at the south end. I intend running a six-inch tile along under the cattle's mangers, with a small one every other stall. Would it be better to have the tile come in straight at the bottom, or would it do to come in at the top and down the center of the wall under the floor, or maybe you could advise something better? SUBSCRIBER.

Ans.—It would be better to have the opening through the wall leading to the tile to be made at the top of the wall on the outside, pass down through the wall to the bottom, and there connect with the tile. This will obviate any danger of snows covering the opening in winter, and the danger of too much draft from a strong wind directly into the mouth of the tile. You will, however, need to make provision for the egress of the impure air by means of flies opening at their lower end about four feet above the stable floor, and leading to the roof of the barn. These flies require to be well fixed, so that there will be a draft of air up them, which will not be the case if they have large cracks. These flies must have regulating doors on their lower openings. This draft will cause a circulation of air and insure the ingress of pure air through your tiles. Place a rather fine wire netting over the openings of the tile to prevent the entrance of dirt.

POLAND-CHINA HOGS.

Would you please inform me where I can buy pure-bred Poland-China hogs. J. A. M.

Ans.—Breeders of Poland-Chinas may find it to their advantage to advertise their stock. This is not the first inquiry we have received for this class.

QUARTER CRACK.

Kindly give, through the columns of your valuable paper, a cure for quarter crack in a horse's hoof. E. H.

Ans.—Pare well down at the coronet, so as to separate the crack from the coronet, in order that the fresh horn will grow without the crack, and continue paring occasionally at the top of the crack as the sound wall grows down. Rasp the bottom of the wall well down on the quarter in order that there be no weight or pressure on the shoe. Put a bar shoe on, and re-set it every 4 weeks. Blister the coronet once every month.

CAPPED HOCK.

I have a colt two years old which has a capped hock. What should I do to take it away? A SUBSCRIBER.

Ans.—Capped hocks are very difficult to reduce. If there be considerable liquid in the abscesses, they should be lanced, and then flushed out, twice daily, with a five-per-cent. solution of carbolic acid until healed. If little liquid be present, the enlargement may be reduced some in time by rubbing a little of the following liniment well in, once daily, viz: Four drams each of iodine and iodide of potassium, mixed with four ounces each of alcohol and glycerine. Repeatedly blistering the parts is sometimes practiced instead of using the liniment.

RHEUMATIC PIGS.

Chester White pigs, 10 weeks old, seem to be doing well, and in the course of one day, one will start to go back, gets poor fast, hide and hair turns dull, loses appetite, gets stiff, and will hardly come to trough, and when it gets there will just stand as if it didn't want to eat. Can you tell me, through your columns, the cause and cure. S. A.

Ans.—The description would indicate rheumatism. When pigs become badly crippled, little can be done for their relief. Keep them in dry quarters and feed nourishing, laxative food. Do not feed barley, peas or corn, but preferably oat chop and shorts. Digestive derangement may be contributory to the trouble, due to overfeeding. A dessertspoonful of sulphur, given in milk, daily, for a few days, if he will take it, may tend to give relief.

TREATMENT FOR SMUT IN SEED WHEAT.

Please give treatment for smut in wheat. J. W. M.

Ans.—Sprinkle the seed grain with a dilute solution of formalin, made by pouring half a pint of formalin into 12 gallons of water. The grain should be spread out on a clean floor or wagon box, and the solution sprinkled over it by means of a sprinkling can. Shovel the seed thoroughly over while being sprinkled, then draw up into a conical heap, and cover with blankets for a few hours, then spread out and shovel over occasionally till dry. Keep free of any bags or vessels with which smutty grain has come in contact. It is better to mix each time just enough of the solution to treat the grain that can be sown within three days. It is well to remember that either formalin or bluestone used too strong, seriously weakens the vitality of the kernel. In 1905, a subscriber reported having used three-quarters of a pint of formalin in five gallons of water to treat seed wheat, with the result that he had to sow his field again. Used according to directions, the formalin treatment is practically harmless to the seed. A pound of formalin, costing about 75 cents, and procurable at any drug store, will, according to Dr. Fletcher, suffice for 27 bushels of seed oats, or 12 bushels of wheat.

Judge (sternly)—Three times in a month? What do you make of that?

Rustus (apologetically)—Dead an' I don't make nuffin, sir. You fellahs up here seems to be de only ones dat makes anything of haulin' me up here.



"EASTLAKE"
STEEL SHINGLES

FIRE, LIGHTNING, RUST AND STORM PROOF

SIMCOE, ONT., April 9th, 1908
"We have handled your 'Eastlake' Shingles for nearly a quarter of a century. They have been on the Court House, Free Library, and other public buildings of this town for 18 years. We have used very large quantities during the past 25 years, and they have always given first-class satisfaction, and have never required any repairs."
(Signed) MADDEN BROS.,
Tinsmiths and Hardware Merchants.

Write for Booklet.
The Metallic Roofing Co. Limited, Manufacturers
TORONTO & WINNIPEG

PEASE "ECONOMY" FURNACE
(Warm Air)

Saves money by requiring less fuel. It pays to know.

Write for booklet—
"The Question of Heating."

PEASE FOUNDRY COMPANY
LIMITED
Toronto - Winnipeg 2338

HOT AIR or Cold Air Suits the
Canadian Airmotor



Will serve you all the YEAR AROUND. Made to stand severe WEAR AND TEAR.

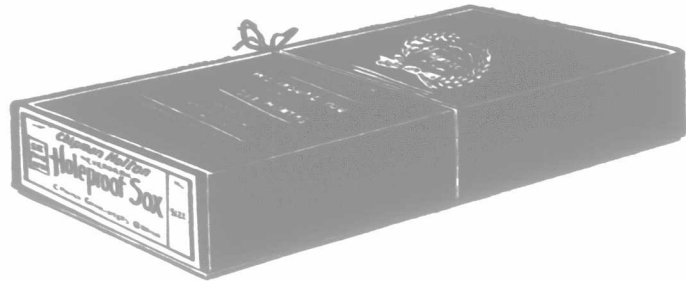
TANKS, GRINDERS, PUMPS, GASOLINE ENGINES.

Ontario Wind Engine & Pump Co., Ltd. Toronto, Ontario.

160 Acres
Of Land for the Settlers in Northern Ontario.

Situated south of the G. T. P. Transcontinental Railway, south of Winnipeg, and 800 miles nearer the seaboard. A rich and productive soil, covered with valuable timber, it is rapidly increasing in value. For full information as to terms of sale, home-stead regulations, and for special colonization rates to settlers, write to:

DONALD SUTHERLAND,
Director of Colonization,
Parliament Buildings, Toronto, Ont.,
or to **THE HON. MR. DUFF,**
Minister of Agriculture.



No holes in your stockings

That's what Neverdarn Holeproof Hosiery means. It is not merely an advertising claim but an absolute guarantee. We guarantee six pairs to wear you without holes for six months. This guarantee is in every box, signed and dated. Could we make a fairer offer? We want you to know Neverdarn Holeproof Hosiery. We simply ask you to try them and guarantee to give you free of charge a new pair for any pair that comes to holes in that time. We could not do this with ordinary hose, but

NEVERDARN Holeproof Hosiery

For men, women and children

are made differently. Only the finest prepared maco and long fibre Egyptian Lisle yarns are used, and interwoven by special machinery. The heels and toes are doubly reinforced, as are the knees of the children's sizes. This weave makes them extra durable, yet soft and easy on the feet. Then the Holeproof dye is absolutely fast—never rubs off. Neverdarn Holeproof Hosiery is stylish in appearance and perfect fitting—hosiery comfort heretofore unknown. Buy six pairs to-day, do away with darning or mended hosiery.

6 Pairs Guaranteed 6 Months, \$2.00

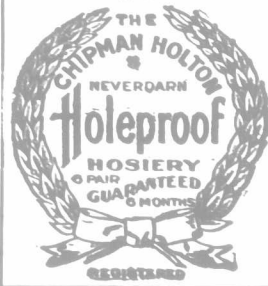
Our Guarantee

If any or all of these six pairs of hosiery require darning or fail to give satisfaction within six months from date of purchase, we will replace with new ones free of charge.

Neverdarn Holeproof Hosiery for men and women, six pairs to the box, \$2.00. Children's sizes, three pairs in box for \$1.00. Only one size and color in each box. Made in black and tan.

Order from your dealer. If he hasn't them write us enclosing money order or bills, and we will send them express prepaid. State size and color. Write to-day.

"It's the name behind the guarantee that makes it good."



The Chipman-Holton Knitting Co., Ltd.
144 Mary Street - Hamilton, Ont.

OF INTEREST TO FARMERS The General Animals Insurance Co'y of Canada

Insure stallions, and also make a specialty of insuring entire colts against risk of death during and after castration.

All kinds of live stock insured.

For particulars apply to :

The General Animals Insurance Co.,
Limited.

25 TORONTO STREET, TORONTO.

'Phone M. 4154.

J. D. Reesor, Manager Western Ontario.

OUR NEW IMPORTATION OF Clydesdale Stallions and Mares

Landed May 20th, consisting of three 4-year-old mares, four 3-year-olds, and two 2-year-olds, by such sires as Baron's Best, Baron Millar, Baron Cedric, Dryden, Benedict, and Dunire Blend, and a few stallions by such sires as Baron's Pride, Everlasting, Ruby Pride, and Majestic Baron. These are the best collection of stallions and mares we have ever had, full of quality and size. Phone connection: R. NESS & SON, HOWICK, QUEBEC.



GOSSIP.

ANOTHER BUTTER RECORD.

The two-year-old Holstein-Friesian cow, Lockhart De Kol 101544, owned by Eugen Le Munion, of Madison County, N. Y., and sired by Prince Hengerveld De Kol Kuperus, dam Lyndia Lockhart Heegstra 2nd, has made a 7-day record, supervised by representatives of Cornell University, which is claimed as a world's record for a two-year-old. This record was commenced soon after the birth of her second calf, when she was two years eleven months and 21 days old. For the best seven consecutive days of a thirty-days test, the record of this young cow was 29.27 lbs. butter, from 556.9 lbs. milk. Up to the time of this performance the world's best record for a cow of this age was 27.06 lbs. of butter in seven days, showing that this cow has beaten the record by 2.21 lbs.

AGRICULTURE IN MEXICO.

The year 1909 was one of the worst ever experienced on the Pacific coast of Mexico from a business standpoint. The crisis was apparently reached in September and October, for by the end of the year conditions began to improve, and the present outlook is promising. This is due to the fact that a very large proportion of the lands suitable for agriculture by irrigation, hitherto neglected, has been brought into cultivation, and the year 1910 will probably see the largest crop of irrigated agricultural produce ever grown on the Pacific coast of Mexico. Both the Mexican Government and the Mexican people seem to have arrived at the conclusion that the true wealth of the country lies in agriculture, and the Government is making every effort to promote and aid the cultivation of the large area of very fertile but uncultivated and unproductive land at present existing.

BRITAIN'S IMMENSE LEAD IN SHIPPING.

The new edition of Lloyd's Register Book contains statistical tables showing the total ocean tonnage of the world to have risen from 21,508,000 in 1886, to 41,915,000 in the current year. Of the 1886 tonnage, 10,291,000 was steam and 11,217,000 sail. The present tonnage is: Steam, 37,291,000, and sail, 4,624,000.

The following table shows the gross steam tonnage owned in the principal maritime countries of the world in the years 1900 and 1910:

	1900.	1910
Great Britain and colonies	12,149,000	18,059,000
German	2,160,000	3,959,000
American (U. S.)	879,000	1,642,000
French	1,052,000	1,448,000
Norwegian	765,000	1,422,000
Japanese	488,000	1,147,000
Italian	540,000	988,000
Dutch	467,000	983,000
Swedish	419,000	783,000
Austro-Hungarian	387,000	778,000
Spanish	642,000	747,000
Danish	412,000	672,000
Total foreign	8,211,000	14,539,000

The British flag amounts to nearly 3,500,000 tons more than the combined totals of the eleven other countries included in the table.

Neither Canadian nor United States vessels trading on the great lakes, in which a very large increase on tonnage has recently taken place, are included in the table. In the 1900 edition of the Register Book, the tonnage of vessels trading on the great lakes was given at 576,000, in the present edition the total amounts to no less than 2,147,000, or nearly three and three-quarters times that of ten years ago. The final table shows the number of iron and steel steamers of 2,000 tons and above now in existence, distinguishing whether built in the United Kingdom or abroad, and includes 422 vessels trading on the great lakes of North America. If, however, only sea-going vessels be taken into account, it is found that of the total number now in existence, over 80 per cent, has been built in the United Kingdom. (Lloyd's Annual, 1910.)

ONTARIO VETERINARIANS STILL LEAD.

That the Ontario Veterinary College gives a thorough and complete course, producing men of scientific knowledge and efficient training, is evidenced by the fact that out of 14 graduates of the leading American Veterinary Colleges who took the Missouri State Board examination recently, only one passed, while the one Ontario representative taking the same examination, passed it, is now having more than he can do, and has been appointed Professor in the St. Joseph (Mo.) Veterinary College. Veterinarians are playing a role of great and growing importance in our national life, their services becoming more extended each year.

Lamenting the scarcity of high-class light horses in the country, "The Stock Farm," a journal devoted to trotting-horse interests, makes these observations: "Our craze for mere speed—in excess the most practically worthless attribute any animal in a civilized country possesses—has blinded us to any attention to substance, shape, size, symmetry, soundness, sense, or any other really worth-while and physically and mercantilely valuable characteristic the horse should have; and our trotter of to-day averages about as homely and unmarketable a brute as the sun shines on. * * * The harness horse which has in our shows superseded our native trotting-bred horse is the English Hackney, generally imported, though a few 'toppers' have been bred here."

BOOK REVIEW.

"Standard Blacksmithing, Horseshoeing and Wagon-making," by J. G. Holmstrom, author of "Modern Blacksmithing," is a rational treatise on horseshoeing and the anatomy of the foot of the horse, suited to the demand of horse-raisers, veterinarians, farriers, and the amateur horseshoer.

Among the many interesting subjects treated upon are the placing of the anvil, correct and incorrect methods of sledge-swinging, the use of blowers, the draft forge, the forge for heavy work, method of pointing a rod, various methods of welding, including the butt-weld, jump-weld, T-weld, and showing the correct and incorrect methods.

The details of making tools and their use is covered in a very interesting and thorough manner.

The subject of horseshoeing is covered fully, including the anatomy of foot, the various kinds of shoes used for different purposes, how to fit, the use of side-weight, methods of preventing interfering and cross-tiring, how to test a hoof, diseases and how treated, and many other interesting as well as instructive details, which are all of particular interest to the farmer. The book contains 212 pages, and is freely illustrated.

This book is published by the Webb Publishing Company, St. Paul, Minn., and can be furnished at \$1 per copy.

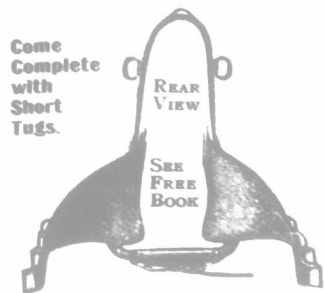
TRADE TOPIC.

HOW THE BLIND READ AND WRITE.—Accompanying his annual letter, in which he asks the readers of "The Farmer's Advocate" to send him the names and post-office addresses of any boys or girls, known to them, whose eyesight is so defective that they cannot attend the Public Schools with advantage, Principal Gardiner, of the Ontario Institution for the Education of the Blind, at Brantford, sends us a card on which he has printed, without ink, the letters used by the blind in their reading. These letters are composed of raised dots or points, arranged in two horizontal rows, and the combinations of points that have been contrived to represent the various literary, numeral and musical characters, are most ingenious. Point letters are much easier to read with the fingers than line letters, and blind children soon learn to read and write words, figures and music signs, the writing being done with a steel stylus and a brass frame, which they call a slate. The School for the Blind is maintained by the Ontario Government as a part of our free school system under the supervision of the Minister of Education, and the Principal will promptly answer any letter of inquiry concerning the school and its work.

All Horse-Collar Troubles Now Prevented or Quickly Cured

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.

HUMANE HORSE COLLARS



It is a fact that only one set of HUMANE HORSE COLLARS on a farm will cure up and keep cured of collar troubles all your horses. Don't use "sweat pads" - it's cruel - especially in hot weather - injures your horses; and besides, the sweat pads cost you more than most collars before you get through. You don't need them with these collars. Every set comes complete with short tugs and ready to use - less trouble to put on and take off - and fit any horse perfectly all by expert workmen, and durable materials.

Don't think of buying your spring harness until you write or fully investigate THE HUMANE HORSE COLLARS. Get our book first.

WHIPPLE HORSE COLLAR COMPANY, LIMITED
Hamilton, Ontario.



UNION STOCK - YARDS Horse Exchange WEST TORONTO, CANADA.

The Greatest Wholesale and Retail Horse Commission Market.

Auction sales of Horses, Carriages, Harness, etc., every Monday and Wednesday. Horses and harness on hand for private sale every day.

The largest, best equipped and most sanitary stables in Canada. Half-mile of railway loading chutes at stable door. Quarter-mile open track for showing horses. Northwest trade a specialty. HERBERT SMITH, Manager. (Late Grand's Repository.)

T. H. HASSARD'S NEW IMPORTATION!



Clydesdale Stallions and Mares. I have still some extra good Clydesdale stallions and 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

ONTARIO VETERINARY COLLEGE

Affiliated with the University of Toronto, and under the control of the Department of Agriculture of Ontario. Infirmary for sick animals at the College. Calendar on application.

College Re-opens September 30th, 1910
E. A. A. GRANGE, V.S., M.S., PRINCIPAL, 40-46 TEMPERANCE ST., TORONTO, ONT.

CLYDESDALES AND HACKNEYS

We have still for sale several good Clydesdale Stallions; also our prize-winning Hackney stallion, Blanch Surprise, and a few good Clydesdale and Hackney mares. All of which will be sold on reasonable terms. Phone connection.

JOHN A. BOAG & SON, Bayview Farm, Queensville, Ont.

CLYDESDALES, Imported and Canadian-bred. I have on hand 2 Imported Clydesdale Stallions, one 4, the other 5 yrs. old; 2 Canadian-bred Clydesdale Stallions, one 2, the other 3 yrs. old; one French Coach Stallion, 4 yrs. old; one Shire Stallion, and the noted Hackney Stallion, Chocolate Jr. I will sell these horses cheap for quick sale. T. D. Elliott, Bolton, Ont.

WAVERLY CLYDESDALES AND HACKNEYS

My 1910 importation of Clydesdale stallions and fillies, and Hackney stallions and fillies, are now in my barns. One and two-year-old Clyde fillies of a character and quality never before excelled. My Hackney stud was never so strong in high-class animals. All are for sale and prices right. ROBT. BEITH, BOWMANVILLE, 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.

GEORGE 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.

HODGKINSON & TISDALE, BEAVERTON, ONTARIO

Mount Victoria Stock Farm, Hudson Heights, Quebec. Champion Clydesdales and Hackneys. We have for sale 2 imp. Clydesdale stallions, by Pride of Bacon and British Chief; 2 imp. Hackney stallions, by Copper King and Terrington Temple-har. Prizewinners. Prices right. Long-distance phone.

T. B. Macaulay, Proprietor. E. Watson, Manager.

QUESTIONS AND ANSWERS. Veterinary.

BLOODY MILK—LAMENESS AND UNTHRIFTINESS.

Cow is gradually failing. She milks fairly well, but gives chunks of clotted blood out of one teat. She is also lame, and, on examining her foot, I found a hole extending up to the heel, and discharging foul-smelling, muddy substance.

W. J. A.

Ans.—The unthriftiness is due to the pain she suffers in the quarter and foot. Bathe the quarter from which the blood comes often with cold water, and give 1 ounce tincture of iron in a pint of cold water, twice daily, until blood ceases to flow. If she becomes constipated, give a pint of raw linseed oil. It is quite possible the condition may recur, and, if so, it would be wise to dry her and fit her for the block. Keep in a clean place, pare the sole well away around the opening in the foot, syringe out well with a five-per-cent. solution of carbolic acid, three times daily, and after dressing apply a warm linseed-meal poultice. Feed well.

UMBILICAL HERNIA.

Yearling colt was castrated a month ago and did well. Now there is a lump the size of a hazelnut between the navel and sheath. It can be pushed back into the abdominal cavity, and causes no pain. I am not sure that the lump was not there before castration. I will keep a bandage on until I see the answer in "The Farmer's Advocate."

P. E. I.

Ans.—I think you will find, upon careful examination, that the tumor is at the umbilicus (navel opening), if not, there is an accidental opening through the walls of the abdomen. The fact that it can readily be returned, but reappears, establishes a rupture. Apply a truss. Your bandage, provided it keeps the tumor pressed into the cavity, will do. It is necessary to have a protuberance on the bandage to press against the tumor. If this does not effect a cure in six weeks, get your veterinarian to operate. He will apply either a clam or a ligature, no doubt.

Miscellaneous.

YELLOW TREFOIL.

I am sending you a weed for identification. I would also like to know a good way to kill it? "BERT," Ontario Co., Ont.

Ans.—The weed submitted is black medick (Medicago lupulina L.); it is also called yellow trefoil. It is considered a useful forage plant in Europe, being frequently sown with grass mixtures. The seed is common in clover seeds, and it should be treated as a weed since its maturing earlier than the clovers and is hard and woody. It has little value outside of pastures, and is of doubtful use there. Short rotations, with thorough cultivation, such as a hoed crop gives, will eradicate it.

BLIND STAGGERS.

1. Have a horse that gave out while plowing; he plowed every day for a week, but one morning, after he had been worked for ten minutes or so, he began making a funny noise, as if he couldn't get his breath. I stopped him, and he staggered and fell. He got up again and seemed as good as ever, but he can't work; have tried him several times, and he does the same thing; he eats well, and is in fair, good condition. What is the cause, and can anything be done for him? 2. Is there a second-hand clothing store in London? T. W.

Ans.—1. This is, in all probability, blind staggers, or "stomach staggers," due to a congestion of the blood vessels of the brain, which is supposed to occur through nervous sympathy from stomach trouble. Draw six to eight quarts of blood from the jugular vein, and give a brisk purgative of 8 drams aloes and 2 drams ginger. Feed bran only until purgation commences. Feed lightly on only first-class foods; exercise regularly when purgation ceases.

2. Yes, but it does not advertise in "The Farmer's Advocate."

Horse Owners! Use

GOMBAULT'S

Caustic Balsam



A Safe, Speedy, and Positive Cure
The safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUTERY OR FIRING. Impossible to produce cure or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars. The Lawrence-Williams Co., Toronto, Ont.

Dr. Page's English Spavin Cure

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ring-

worm on Cattle, and to remove all unnatural enlargements. This preparation (unlike others) acts by absorption rather than blister. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair.

Manufactured by Dr. Frederick A. Page & Son, 7 and 9 Yorkshire Road, London, E. C. Mailed to any address upon receipt of price, \$1.00. Canadian agents:

J. A. JOHNSTON & CO., Druggists, 171 King St. E. TORONTO, ONT.

Fistula and Poll Evil

Any person, however inexperienced, can readily cure either disease with

Fleming's Fistula and Poll Evil Cure—even bad old cases that skilled doctors have abandoned. Easy and simple; no cutting; just a little attention every fifth day—and your money refunded if it ever fails. Cures most cases within thirty days, leaving the horse sound and smooth. All particulars given in

Fleming's Vest-Pocket Veterinary Adviser. Write us for a free copy. Ninety-six pages, covering more than a hundred veterinary subjects. Durable bound, indexed and illustrated. FLEMING BROS., Chemists, 75 Church St., Toronto, Ontario

Never without a Bottle

36 James St., South Hamilton, Ont. July 19th, 1909 "We are never without a bottle of your Spavin Cure in our stable, as we believe it the best on the market and have cured several Spavins with it." J. Irwin Van Fleet, Kendall's Spavin Cure is the certain, quick cure for Spavin, Ringbone, Splint, Curb, Swollen Joints, Cuts, Sprains and other Lameness. Keep it handy for emergencies. The best home liniment. \$1. a bottle—6 for \$6.—at all dealers. Ask for "A Treatise On The Horse" or write us. Dr. B. J. KENDALL CO., Enoxbury Falls, Vt.

ABSORBINE

will reduce inflamed, swollen Joints, Bruises, Soft Bunches, Cure Boils, Fistula or any unhealthy sore quickly; pleasant to use; does not blister under bandage or remove the hair, and you can work the horse. \$2 per bottle, delivered. Book 7 E free. ABSORBINE, JR., for man-kind, \$1 and \$2 per bottle. Reduces Varicose Veins, Varicocele, Hydrocele, Gout, Wens, Strains, Bruises, stops Pain and Inflammation. Your druggist can supply and give reference. Will tell you more if you write. Manufactured only by W. F. YOUNG, P. O. F., 255 Temple St., Springfield, Mass. Canadian Agents: Lyman's Ltd., Montreal.

HIGHLY-BRED CLYDESDALES

FOR SALE

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, Annan, Scotland

HAD LAME BACK

Was Almost Unable To Move.
Two Boxes of Doan's Kidney Pills Cured Her.

Mrs. M. B. Cairns, Upham, N.B., writes: "I feel it my duty to drop you a few lines to let you know what Doan's Kidney Pills did for me. I had such a lame back that I was almost unable to move, and my kidneys were in an awful condition.

"After taking two boxes of Doan's Pills I was completely cured and feel as well as I ever did."

Doan's Kidney Pills are a specific for all Kidney Troubles. They begin by expelling all the poisonous matter from the kidneys, and then heal the delicate membranes and make their action regular and natural.

Doan's Kidney Pills are entirely vegetable, and may be safely taken by young and old.

Price 50c per box, or 3 boxes for \$1.25, at all dealers, or mailed direct on receipt of price by The T. Millburn Co., Limited, Toronto, Ont.

When ordering direct, specify "Doan's."

STOCK MEN

When you are wanting any cuts of Poultry, Live Stock, or for Advertising, try our specially deep-etched plates.

PRINT CLEAN
WEAR LONGER
PRICE REASONABLE

Write us your wants.

ROBERTS
ENGRAVING
COMPANY
LONDON-CANADA

Registered Seed Wheat

For sale: Dawson's Golden Chaff, selected for 11 years according to the rules of the Canadian Seed Growers Association. Scored 95 points out of 100.

C. R. Gies, Heidelberg, Ont.

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.

ABERDEEN - ANGUS CATTLE

5 choice yearling bulls for sale at reasonable prices. Also females any age. Parties requiring such will get good value. Correspondence invited.
GEO. DAVIS & SONS, ALTON, ONT.

ABERDEEN - ANGUS

Will sell both sexes; fair prices. Come and see them before buying. Drums station.

WALTER HALL, Washington, Ont.

Glenburn Stock Farm
Shorthorns, Shropshires, Berkshires, and Barred Plymouth Rocks.
JOHN RACEY, Lennoxville, Quebec.

SHORTHORN FEMALES

OF ALL AGES FOR SALE
Prices for such kinds of customers. Have one red eleven-month-old bull, Jersey, a Chimney, price \$100.

J. T. GIBSON, DENFIELD, ONTARIO.
Bud's Emblem - 63860 - (28-4905) A H. B. First-class young bull, C. N. F., 1909, by that famous champion sire, the Champion Old Leicester sire, sired by the Old W. drum herd of SHORE HORN, P. O. Ontario. A F. & G. Auld, Eden Mills P. O. Ont.

A HIGH-CLASS YOUNG BULL FOR SALE, sired by Mrs. Ben Leonard; Shorthorn Cow, also a better calf of good quality. Prices reasonable. Stewart M. Graham, Port Perry, Ontario.

GOSSIP.

CANADIAN IMMIGRANTS.

In the years 1908 and 1909, 90,726 agriculturists and 12,688 laborers came to Canada from the United States. Many of these were expatriated Canadians, and most of the others, directly or indirectly, came from Northern Europe. Regarding the influx from Europe, during the eight years ending March 31, 1909, 73 per cent. of the European arrivals in Canada belonged to the Teutonic and Celtic races, and 27 per cent. to the Slavic and Iberic races. Thus, it is seen that our West is filling with the types most akin to the Anglo-Saxon element of the older Provinces. Further, one hundred thousand people have entered the West since the beginning of this year. In April, there were 48,000, of whom 40 per cent. were from the United States, and of the rest, 75 per cent. were English-speaking.

During the eight years ending March 31, 1909, only 23 per cent. of the immigrant arrivals in the United States were of Teutonic and Celtic origin, while 77 per cent. were of Slavic or Iberic origin. This, too, shows that to Canada is coming the lion's share of the desirable European emigrants, which, in the years to come, will go far towards the establishing of a reliable citizenship.

SHEEP AND SWINE AT THE HIGHLAND SHOW.

The exhibit of sheep at the Highland Society's Show this year was well up to a high standard, the Scottish breeds, Blackfaced and Cheviots, being numerously represented by first-class specimens, while Leicesters, Shropshires, Oxfords and Suffolks also made a good showing. Border Leicesters made a grand show, most of them being brought out in the pink of condition. In a class of thirteen rams, two shears and over, the winner was R. G. Murray's Knockdon Stamp, by Merton Swell. This ram was bought at Kelso last year for £10. He is a big, wide-bodied sheep, on short legs, is well covered, and has an extra good back. The second award went to His Majesty, exhibited by J. & J. R. C. Smith, and bred by Mr. Mark, of Sunnyside. This sheep was second at the Royal Show at Liverpool. King Cole, the third-prize ram at the Royal, was also third here. He was bred by W. S. Bell, East Fortune, and exhibited by J. Evelyn Carr, and has for his sire Fortune Barrelwell. He was shown in fine form, and has the best coat of the lot. In a strong class of 46 entries of shaggy rams, the first prize went to a stylish sheep shown by Wm. Robson. This ram has a very sweet head, and a good coat, as far as it goes, but lacks covering underneath. The second prize went to John Kennard, Jr., for a short-legged, thick-bodied sheep. Robert Wallace was third, with one of the best handling and best covered in the class. The fourth, belonging to J. & J. R. C. Smith, would, with most of those around the ring, be a popular winner. He has a thick body, an extra good coat and cover, and a true Border Leicester head.

In Shropshires, the President's medal went to T. A. Buttar, for a sheep of grand quality, a two-shear, bred by T. S. Minton, and a winner at the Royal last year.

Oxford Downes were shown by A. J. Rafter, M. P., who won first and second in single ram and ewes. Suffolks were shown by Sir Ernest Cassel, who won an honorable mention, followed by Wm. A. Gies & Sons.

Yorkshire and Blue faces made a good showing in the show section. In the class for Yorkshire heifers, with Geo. Simpson as judge, D. W. Gilm was a clear winner, with a fine neck being the same selection had first and second prizes in yearling ewes. The yearling forward that year, Thorne, of Park Farm, was first.

Red shires were shown by J. C. Goring, J. Johnson, and D. E. Houghton, the first reward going to the best ewe, and Mr. Johnson had a yearling winner in both of the classes.

The yearling forward medal for the best ewe was won by R. E. W. Stephenson, for his York shire, a yearling ewe. The best yearling forward in ewes was won by Wm. A. Gies & Sons, for their York shire, a yearling ewe. The best yearling forward in ewes was won by Wm. A. Gies & Sons, for their York shire, a yearling ewe.

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Young bulls and ones and two-year-old heifers, of showing quality and most fashionable breeding; thick-fleshed, smooth and even.

L. O. CLIFFORD, Oshawa, Ont.

ELM PARK Clydes, Aberdeen-Angus and Suffolks. We have at present six Clyde mares recorded in both Canadian and American Studbooks. Three of them sired by Lord Charming [2264] and two of them mated to Monticello Marquis [6758]. Our cattle number fifty-five head of both sexes. Our Suffolk sheep are doing well, and flock numbers sixty-seven. James Bowman, Elm Park, Guelph, Ont.

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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.

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Are bred on most fashionable Scotch lines, and are of high-class individuality. For sale are 6 young bulls from 6 to 10 months of age. A few thick, sappy lot. Also 10 yearlings and 14 two-year-old heifers. Show in our catalogue. Telephone connection. DAVID BIRRELL & SON, GREENWOOD P. O., ONT., CLAREMONT STATION.

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8 good young bulls and 4 one-year-old heifers. All sired by Imp. Prince of Scotland. Strong show material in the lot. Prices moderate. Correspondence solicited. J. Watt & Son, Salem P. O., Flora Station, C. P. R. or G. T. R.

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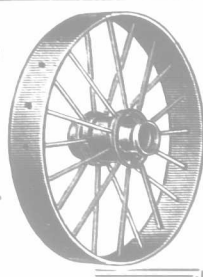
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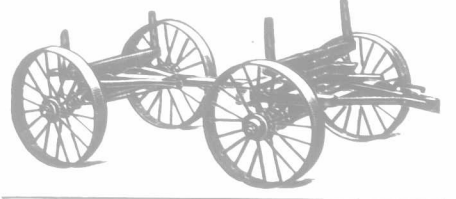
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SHORTHORN BULLS

I have some choice young bulls, from imp. sire and dams. Good ones at reasonable rate. Come and see them. Prices right. Also some choice heifers.

J. Brydone,
Milverton, Ontario.
G. T. R. and C. P. R. Station.



Willow Bank Stock Farm
SHORTHORNS AND LEICESTERS.
Herd established 1855; flock, 1848. The great Duthie-bred bull, Imp. Joy of Morning—3570, and the Missie bull, Royal Star—7282—heads my herd. Choice selections to offer at all times in both bulls and females.

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OF REAL PURBINE
Shorthorns
For sale: Young cows and heifers, bred right, priced right, and the right kind. Come and see them.

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For Sale or Exchange, **Shorthorn Bull**, Imp. Scottish Prince—9289—good breeding condition. I will sell reasonable, or exchange him for an imported bull for breeding purposes, or a good family and a stock producer, toward improving.

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Offered at **Shorthorn Cows** at bargain prices. Imported from Canada. Bontanic imp. 9994—also Shorthorn cow calves. Three Clydesdale heifers 1 and 2 years old, and Yorkshire sows ready to breed. **Free Shipping Station, C. P. R.**

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SHORTHORNS—One home young Lady Fanny, 2 years old, good herd header. **BERKSHIRES**—One several young heifers. A few prizes. Both sexes. Write or come and see. **Prices moderate.** **ISRAEL GROFF, Elmira, Ontario.**

QUESTIONS AND ANSWERS. Miscellaneous.

HOGS COUGH.
I have a lot of young hogs that are bothered with a cough, all my hogs seem to get it at about two months old; other ways they seem all right. They are running in pasture, and I am giving them chop and shorts mixed. Please give cause and cure.

H. H.

Ans.—Coughing is sometimes due to dusty sleeping places, the dust being inhaled and causing irritation of the bronchial tubes and the lungs. It is also supposed to accompany constipation, but should not occur in the case of hogs on pasture. Sulphur given in feed at the rate of a dessertspoonful for each hog, daily for a week, would probably give relief.

MISCELLANEOUS.
1. When is the best time to sow rye to plow down for manure?
2. If sowed in the fall, will it do for pasture this fall, and grow next spring again?
3. Is it as good for the land as buckwheat?
4. When is the best time to sow timothy with wheat, now or in spring?
5. Could a person kill bindweed from the spring till 1st September, by cultivating?
6. What is the best kind of wheat to sow on new land, the land is very strong; do you know which kind will stand up best?
7. What is the best kind of grain to sow with alfalfa, or would it do better sowed without grain?
8. Do you recommend skim plowing in the fall, or is one good deep plowing, with a skimmer, just as good?
9. How much rye should be sown to an acre; should it be sown with drill or broadcast?
10. Where can rye be bought, and how much a bushel is it worth?
11. Could you tell me how to exterminate buffalo bugs?

E. B.
Perth Co., Ont.

Ans.—1. Rye may be sown as early in August as the ground can be prepared for it. If you wish to use it for manuring purposes, you will want as much growth as you can get, and yet turn under.
2. Yes.
3. No, neither of the plants are legumes; yet buckwheat, on account of its greater growth of leaf and less woody stem when plowed under, mellow the soil to a greater degree.
4. Opinion differs; you will be safe, with a reasonable season, to sow with the wheat.
5. By cultivating twice a week, so as to prevent the growth of any leaves all the season, you will at least greatly reduce it, but it is one of the most tenacious of all weeds.
6. Dawson Golden Chaff has been found a good yielder, and well adapted to strong lands.
7. Barley, sown thin, is generally conceded in Ontario as the best nurse crop for alfalfa. It has done well, however, in exceptional cases, with oats. You will probably get a full stand a little sooner where no nurse crop is grown, but will be losing the use of the land for a season, or most of it.
8. Shallow plowing early in the fall, and deeper plowing later, is desirable where one is combating weeds.
9. From 1 1/2 to 2 bushels per acre. It may be sown either way, though drilling will, in the greater number of cases, probably give most satisfaction.
10. Good alfalfa seed is available everywhere.
11. For plowing down, you should get a crop to the height of 10 to 15 inches from early to late in the season, and then plow under. A few days' growth on them, except in the heaviest class of ground, will give you a better class of growth. It is better to plow with a plow than with a drill, if in choice, poor or small ground, or where you wish to plow into a close tight soil, and leave it this winter as a nurse crop, because the better seed stands, the less it should be sown, and the less it should be plowed under, and the less it should be sown in the spring, and the less it should be plowed under in the spring. Alfalfa 24 bushels per acre is a good yield, and that is all you can expect to get.

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.
W. G. PETTIT & SONS, Freeman, Ont.
Farms close to Burlington Jct., G. T. R.

INVERNESS SHORTHORNS
I can supply Shorthorns of all ages, with richest Scotch breeding and high-class individuality.
W. H. EASTBROOK, 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.

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.

A. Edward Meyer

P. O. Box 378, Guelph, Ont.
Breeds **SCOTCH SHORTHORNS** Exclusively. Twelve of the most noted Scotch tribes have representatives in my herd. Herd bulls: Scottish Hero (imp.) = 55042 = (90065) 295765 A. H. B.; Gloster King = 68703 = 283804 A. H. B. Young stock for sale. Long-distance 'phone in house.

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.**

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.
Elora Station, G. T. R. and C. P. R. J. A. WATT, SALEM.

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.
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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, Heuvelton, N. Y.
Near Prescott.

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.**

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R. HONEY, Brickley, Ont.
Northumberland Co.
Offers a choice lot of heifers and sows ready to mate; also orders taken for the coming crop of calves from Prince Posh Calamity Bleske and R.O.P. cows.

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 granddams have over 21 lbs. butter in 7 days. Also younger ones from good A. R. O. dams. This will be sold right, considering their backing.
P. D. Ede, Oxford Centre, Woodstock Stn.
LONG-DISTANCE TELEPHONE.

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 hogs 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 Posh and Pontiac Sarcastic, a grandson of Sarcastic Lad. Registered. Delivered. Express paid. Safe deliveries guaranteed.
E. D. GEORGE & SONS, PUTNAM, ONT.

Maple Grove Holsteins

It is from Maple Grove Holsteins and their descendants that the largest records are made. They combine individuality, quality, with the greatest performance. **H. Bollert, Cassel, Ont.**

Silver Creek Holsteins

Official records range from 13 lbs. for 2-year-olds to 22 lbs. for mature cows. Stock bull, King Fayne Clothilde, his 7 nearest dams records average 27 lbs. For sale are young stock of both sexes, sired by bull with high official backing and out of Record cows.
A. H. TEEPLE, Currie's P.O., Ont., Woodstock, Sta. 'Phone connection.

MAPLE HILL HOLSTEIN-FRIESIANS SPECIAL OFFERING:

Four-year-old cow, fresh last October, bred April 3rd to Choicest Canary, whose dam is the highest seven- and thirty-day record cow in Canada.
G. W. CLEMONS, St. George, Ont.
Bell phone.

The Maples Holstein Herd

of Record-of-Merit cows, headed by King Posh De Kol. Nothing for sale at present except choice bull calves from Record-of-Merit cows. Also one or two good cows.
WALBURN RIVERS, FOLDEN'S, ONTARIO

Severe Pains In The Liver,

Had Several Doctors.


A COMPLETE CURE EFFECTED BY
A FEW VIALS OF
MILBURN'S LAXA-LIVER PILLS

Mr. F. H. Wood, Crystal, Ont., writes: "For several years I was greatly troubled with severe pains in the liver. I had several doctors attend me but without any success. At last I was advised to try Milburn's Laxa-Liver Pills, and after taking a few vials I was completely cured. It is, now, about six months since I took them, and I have had no return of my trouble since. I can honestly recommend them to every person who is troubled the same as I was."

Milburn's Laxa-Liver Pills are 25c per vial or 5 vials for \$1.00, at all dealers or will be mailed direct, on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

Cherry Bank Ayrshires! Present offering: One yearling and three last fall bulls. All good ones, with good breeding; also females any age, and calves of either sex. Write for prices.

P. D. McArthur,
1/2-mile from Howick station, North Georgetown, Que.



Ayrshire Cattle
Of the choicest producing strains. Record of Performance work a specialty. Good udders. Good teats. Good records. For particulars write:

WILLIAM THORN, Trout Run Stock Farm, Lynedoch, Ontario.

Ayrshires Bull calves, from 4 months to 9 months, from imported sire and Record of Performance dams. Records 50 to 63 pounds per day.

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HILLCREST AYRSHIRES.—Bred for production and large teats. Record of Performance work a specialty. Fifty head to select from. Prices right.

FRANK HARRIS, Mount Elgin, Ont.

Stick to the Farm.

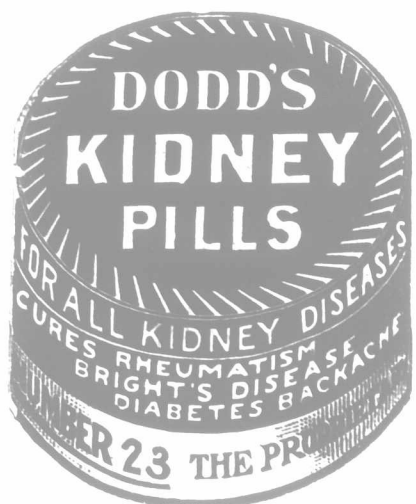
"Stick to the farm," says the President, To the wide-eyed farmer boy, Then he hies him back to his White House home, With its air of rustic joy.

"Stick to the farm," says the railroad king, To the lad who looks afar, Then hies him back on the double-quick, To his rustic private car.

"Stick to the farm," says the clergyman, To the youth on the worm-fence perch, Then lays his ear to the ground to hear A call to a city church.

"Stick to the farm," says the doctor wise, To those who would break the rut, Then hies him where the appendix grows, In hountiful crops to eat.

—New York Sun.



DODD'S KIDNEY PILLS

FOR ALL KIDNEY DISEASES
CURES RHEUMATISM
BRIGHT'S DISEASE
DIABETES BACKACHE

NO. 23 THE PR...

QUESTIONS AND ANSWERS. Miscellaneous.

HOMEMADE LIGHTNING-RODS.

I would like to have published in the columns of your valuable journal, an article that appeared last year re homemade lightning-rods. Please give best method of making and putting in position, and how deep rods should be in the ground, quality of material, etc.

J. N. T.

Ans.—In issue of July 28th, 1910, page 1208, under the caption "Homemade Lightning Rods," you will find your question discussed.

TURNIP LICE.

What would you recommend for destroying turnip lice? Would you advise scattering on land plaster or spraying with bluestone? If so, what quantity of bluestone would you use? Lice are principally on the under side of leaves.

L. K.

Ans.—This is very difficult to treat, owing to the aphid working on the under-side of the leaf. See answer to this question in July 14th issue, page 1154. Kerosene emulsion is considered a more suitable spray than bluestone, and slaked lime is more effectual than land plaster.

ADDITION TO NAME.

A young man goes to a Western Province say his name is Robert Jones. But for better distinction he adds Henry, and enters for homestead as Robert Henry Jones, and keeps that name all through his business for twenty years or more. He has considerable property and never married. In case of his demise, would his heirs have any trouble claiming his property, with or without a will? If so, what steps should be taken to make it all right?

J. M.

Ans.—Neither his heirs in case of intestacy, nor his devisees in the event of leaving a will, would have any serious trouble of the sort suggested.

DAMAGE FROM FIRE.

A man starts a fire in July in his hay field to boil his tea kettle, neglects it, a high wind afterwards drives it into the woods on his own land.

1. Is it an offence against the law to start a fire? If so, what is the punishment?

2. Is he responsible for any damage it may do his neighbors afterwards?

A READER.

Ans.—The Statute Law Amendment Act, 1907 (Ontario Statutes of Edw. VII., Chap. 23, Sec. 41), provides that no action shall be brought against any person in whose house or building or on whose estate any fire shall accidentally begin, nor shall any recompense be made by him for any damage suffered thereby, any law, usage or custom to the contrary notwithstanding; provided that no contract or agreement made between landlord and tenant shall be hereby defeated or made void. These provisions are declared by the Act to have been in force on and since 1st July, 1867.

FEEDING SHOW CALF—HOGS COUGH.

1. What would you feed to a Short-horn bull calf born on the 10th of April? It is sucking the cow three times a day, along with a quart of oat chop and clover grass three times a day. I intend to show at the fall fair.

2. What is the best way to kill the perennial sow thistle?

INTERESTED READER.

Ans.—1. The meal ration would be improved by adding a little bran and oil-cake meal, say a pint of the former and half-pint of the latter, feeding as much of the mixture as he would clean up at each feeding. If the cow is giving a fair share of milk, he should do well on this. If not, a nurse cow, in addition, would flesh him faster.

2. Perennial sow thistle is one of the most difficult weeds to combat, since it spreads by roots as well as seeds. Keep it from flowering. Summer-fallow or hoe crop the land, cultivating so often as to prevent the plant from putting forth leaves, thus starving the thick rootstock. Do this all one season, then follow with a heavy, dense, quick-growing crop, such as millet or rape. Eternal vigilance is the price of success in combating this weed.

Springhill Ayrshires

Headed by two bulls whose dams have the highest official records in Scotland. Order a bull calf out of our best cows.

We can please you in all ages and sexes **Robt. Hunter & Sons, Maxville, Ont.**

SPRINGBANK AYRSHIRES Canada's leading herd of Record of Performance Ayrshires. Big records, big cattle, big udders and big teats. Present offering: Four spring heifer calves. All good ones, with good breeding. Are now booking orders for calves of either sex. **A. S. TURNER & SON, RYCKMAN'S CORNERS, ONTARIO.** Three miles south of Hamilton.

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.

STOCKWOOD AYRSHIRES Are producers of milk testing high in butter-fat. In my herd I have a range of selection, either imp. or Canadian-bred, of either young bulls or females, unexcelled in Canada. Price and terms to suit purchaser. **D. M. WATT, ST. LOUIS STA., QUE.**

WOOL HIDES WRITE FOR PRICES.

E. T. CARTER & CO.,
84 Front St. E., TORONTO, ONT.

Leicester Sheep and Duroc-Jersey Swine Choicely bred. Either sex. Various ages. Well telephone wood, Ontario. **MAC CAMPBELL & SOAS, North.**

Springbank Oxford Downs One imported 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.

Farmers and Cattlemen, Read This!

When you cannot sell your export cattle at satisfactory prices at home, and wish to ship them to the Old Country markets, write or wire for steamer space, market and shipping information to **Donald Munro, Live-stock Forwarding Agent and Commission Salesman, 43 St. Sacrament Street, Montreal.**

Load your cattle carefully, and bill them to me. I provide the necessary feed, insurance, etc., pay freight and all other expenses from shipping point, and give liberal cash advances on all consignments. Cattle are loaded on steamer under my personal supervision, and placed in charge of capable attendants for the ocean voyage. I represent the most reliable salesmen at all the different British markets. BUSINESS ESTABLISHED 1890. REFERENCES: THE MORGAN BANK, MONTREAL.

SOUTHDOWNS SHROPSHIRE AND COTSWOLDS

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

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. Hampton, 22nd and 23rd 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**, 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.**

Newcastle Tamworths and Shorthorns

FOR SALE: Young sows due April and May, by imp. boar, dams by Colwell'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.

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.

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.**

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 WIESON & SONS, FERGUS, ONT.**

MAPLE LEAF BERKSHIRES

For sale: Young sows bred and ready to breed; boars fit for service; also young pigs farrowed in March and April. Imp. sires and dams. Pairs not akin. C.P.R. and G.T.R.

JOSHUA LAWRENCE,
Oxford Centre P. O., Ontario.

MAPLE GROVE YORKSHIRES. To make room for the natural increase in our herd, we now offer for immediate disposal: 25 choice young and very typical sows, an exceedingly choice, easy-feeding bunch. Many of them sired by M. G. Champion, 20102, champion and silver medal boar at Toronto in 1907, and first as a three-year-old in the aged class in 1908, a grand stock-getter. Many of our sows are prize winners, and are of the best Yorkshire blood in England and Canada. 100 Feb., Mar. and Apr. pigs—pairs not related. We are putting prices low because we must sell. Satisfaction guaranteed.

H. S. McDIARMID, Fingal, Ont.
Shelden Station. Long-distance phone in house.

Hillcrest Tamworths are second to none in America for type and quality. For sale are both sexes and all ages, from sows bred and bears fit for service down to youngsters. **Herbert German, St. George, Ont.**

SUNNYSIDE CHESTER WHITE HOGS. I am now offering some very choice young things of both sexes, of breeding age. A few Shropshire sheep of both sexes. A number of Bronze turkeys and toms, and Red Cap cockerels and pullets.

W. E. WRIGHT, Gleanworth P. O., Ont.

MORRISTON TAMWORTHS A grand lot of boars 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, Morriston, Ont.

When Writing Mention This Paper.

GOSSIP.

In his changed advertisement in this week's issue, Stewart M. Graham, of Port Perry, Ont., offers for sale a choice and choicely-bred young Shorthorn cow and young heifer.

Wm. Barnett & Sons, Living Springs, Ont., writes: The imported ram offered for sale in our advertisement is in good condition, and would make a show sheep. He was second at Toronto, and first at London and Ottawa as a lamb. Have used him for three successive years in our flock. The shearing ewes are sired by the same ram, and are a fine, even bunch. This year's crop of lambs are low-set, sturdy fellows, and will be offered for sale later.

Mac Campbell & Sons write: We have had a splendid demand the past year for Duroc-Jersey hogs, and have received many flattering letters from our customers after receiving the animals. We have a few bears fit for service, and sows bred and ready to breed, for sale yet. Also a grand lot of Leicester rams and this year's crop of ram lambs, well-grown, well-woolled, lusty fellows. In order to take advantage of the rural-mail delivery, we are obliged to change our post-office address from Howick to Northwood. We also have Bell 'phone from Chatham.

FARM TO BE BOUGHT.

J. E. Wickson, Bronte P. O., Halton Co., Ontario, is advertising elsewhere in this issue, a farm for sale, which should engage the attention of men who are looking for a desirable farm home, or for a good farm investment for surplus money. Halton is a good county, within easy distance of splendid markets, and falls well within about the best fruit district in Canada. The farm has a good brick house and outbuildings, is a well tilled, deep clay loam of 108 acres, and has a bush, orchard, and good improvements. Look up the advertisement and read what is there said.

SHEAF EXHIBIT.

In the Ontario Department of Agriculture's Field-crop Competition there is a live interest and a splendid rivalry. The judges are now at work in some sections, have finished in others, while in others they have not yet begun. Two secondary competitions, which are awakening the keenest sort of interest, are the sheaf exhibit and the two-bushel sacks of grain. The participants in these must have won a first, second or third in the previous competition.

For the sheaf exhibit, Ontario is divided into three divisions, viz.: No. 2, all counties east of York and Simcoe; No. 3, York, Simcoe, and all counties west and south-west of the same; No. 1, Muskoka, Parry Sound, Haliburton, Manitowlin, Algoma and other districts in New Ontario.

Prizes are offered in each section. The division is made on account of the inequalities of soil and climate throughout the Province, and with a desire to place competitors on a more even footing.

Two hundred and forty dollars has been granted for the sheaf exhibit by the Directors of the Canadian National Exhibition, Toronto.

For entries and further particulars, write J. Lorrie Wilson, Superintendent, Parliament Buildings, Toronto.

Maid of the True Heart.

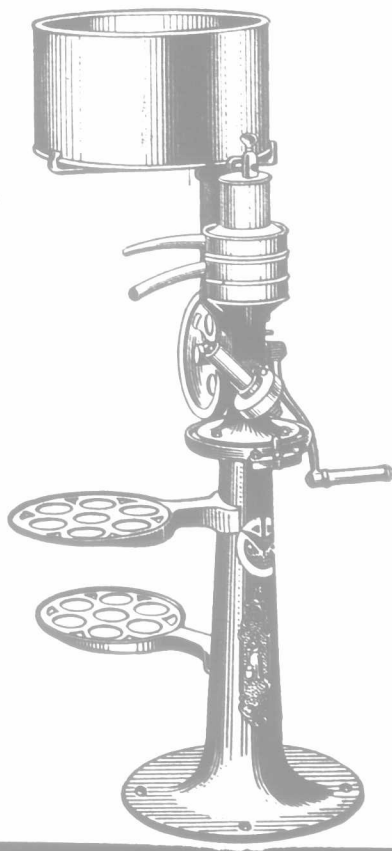
Maid of the True Heart, you and I
Have watched the wrecks of many years
Drift down the tide of human tears
That ebb into eternity.

But what care we for mortal fears,
Because the present cannot last,
Or that a life wreck disappears
With some lost soul lashed to the mast!

Our bark will ride the billows whether
The gales of life are the loud or low;
Let floods of tears sink lost below,
Our sail will catch the sunny weather,
Love is the helm and storms may
Blow.

But you will ride through every clime
Shall you not ride the tides are low,
And not a wreck the part of Time.

Edwin Johnston.



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.

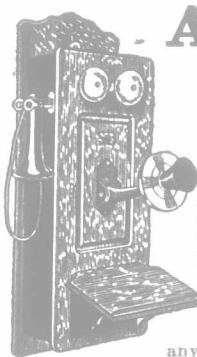
Branch Offices:—Regina, Sask.; Edmonton, Alta.; Moncton, N.B.

The Help the Farmer Longs for is Supplied by
The Genuine Tolton Pea Harvester



WITH NEW PATENT BUNCHER AT WORK

1. Harvesting in the most complete manner from ten to twelve acres per day.
2. Harvesters to suit all kinds of mowers. Many thousands sold.
Every Machine Warranted. Our Motto: "Not how Cheap, but how Good."
No drilling holes in Mower Bar or Inside Shoe. A wrench is all that is required to attach it to any mower. Give your orders to any of our local agents, or send direct to
TOLTON BROS., LIMITED, GUELPH, ONTARIO



Anti-Trust Prices Freight Prepaid
To You—No Duty
on FARM and TOWN
Telephones and Switchboards

Poles, Wire, Brackets, Insulators, Tools, Lightning Arresters, Ground Rods, Batteries, Insulated Wire, and everything necessary.

NO CHARGE for our experts' letters of advice, drawings, explanations, instructions, telling you in any language, non-technical, just how to build, own and operate your rural, town or long distance lines in a good but economical way and at a profit, thereby getting your own telephone free.

We are the largest, exclusive and the only bona-fide Independent Telephone and Switchboard makers in Canada or Great Britain.

Our Telephones are extensively used in Canada, England, France and by the U. S. Government.

Our great illustrated book on the Telephone sent Free to anyone writing us about any new telephone lines or systems being talked of or organized.

We have a splendid money-making proposition for good agents.

The Dominion Telephone Mfg Co., Ltd. Dept. C, Waterford, Ont., Canada.

POLES OF STERLING QUALITY

Michigan White Cedar

W. C. STERLING & SON COMPANY

Oldest Cedar Pole Firm in Business

Producers for 30 Years

1880

MONROE, MICHIGAN

1910

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GRAND TRUNK RAILWAY SYSTEM

Spend Your Vacation at the Seaside.

The low-rate excursions via the Grand Trunk Railway System to:

Cacouna, Que.	Charlottetown, P.E.I.
Halifax, N. S.	Kennebunkport, Me.
Murray Bay, Que.	North Sydney, N. S.
Old Orchard, Me.	Portland, Me.
St. John, N. B.	St. John's, Nfld.
	Sydney, N. S.

will enable you to do so at small cost.

TICKETS GOOD GOING AUG. 8, 9, 10, 11.
RETURN LIMIT AUG. 30, 1910.

Sailings of Passenger Steamers.

From Sarnia to Soo, Port Arthur and Duluth every Monday, Wednesday and Saturday at 3.30 p. m.; the Wednesday and Saturday steamers going through to Duluth.

Sailings from Collingwood 1.30 p. m. and Owen Sound 11.30 p. m. Mondays, Wednesdays and Saturdays for Soo and Georgian Bay ports.

Sailings from Penetang, 3.15 p. m. to Parry Sound and way ports daily except Sunday.

Tickets and full information from:

GRAND TRUNK AGENTS,

OR ADDRESS

J. D. McDONALD, D. P. A., TORONTO



ELECTRIC BEANS

Sized supreme as a Blood and Nerve Tonic

They are unequalled for Biliousness, Sick Headache, Constipation, Heart Palpitation, Indigestion and Anemia.

Those who are in a position to know what is best use "ELECTRIC BEANS."

Write for Free Sample

50c. a Box at all Dealers or upon receipt of price, from
THE ELECTRIC BEAN CHEMICAL CO. Ltd.
OTTAWA.

FARM FOR SALE.

A pretty farm between Oakville and Burlington, not far from lake, on line of Electric Railway; cars stop at gate. 118 acres choice level land, deep clay loam, clean, well tilled, 33 suitable for fruit. Never-failing spring, good fences; brick house, metal road; bank barn, metal roofed; silo; stable and pigpen; floors cemented; implement shed, new poultry house. Eight acres bush, nine acres orchard, including beside apple, 150 pear trees, also plum, cherry, peach and small fruit. Market of half a million in radius of twenty-five miles. J. E. Wickson, Bronte P. O.

He—It's quite true that there are microbes in kisses.
She—Oh, the sweetest of all things.

For nothing I will tell you all about Cement

You may have my expert advice without charge. I can save you considerable money.

I charge nothing.

These pictures show you plainly how simple a matter it is to change a decrepit frame house into one of cement-stone.

YOU pay nothing for what I tell you.

And the reason I offer you my services for nothing is simply that the companies that employ me want the farming community awakened to the value that cement—of the right kind—has for every farmer. Even if they never sell you any cement, they want you and your neighbors to be informed on the uses of cement—and the ease and simplicity with which you can cheaply use it.

No High-Priced Labor Necessary

I can soon show you that it does not require an expensive mechanic to use cement-concrete instead of lumber for ANY purpose. I make the whole subject so plain and simple that you yourself could easily renovate your frame house, barn, hen house, wagon shed. I will tell you how to make a hundred farm-utilities from cement quickly and cheaply—more cheaply than you could with lumber. And bear in mind the fact that you are charged nothing for this "Education in Cement-Using." You will not be bothered to buy anything, either. There are no "strings" to this talk of mine—not one. Just write me and ask questions.

Cement Endures—Lumber Decays

That alone is the biggest reason why you should overcoat your house and barn with cement, as I will tell you precisely how to do. Cement is almost indestructible. Buildings exist in Great Britain and elsewhere that were built of cement by the Romans two thousand years ago. For cement rightly used—as I will show you how to use it—makes structures fire-proof; wet-proof; decay-proof; warmer in winter; cooler in summer. And it is **ECONOMICAL**—much more so than lumber, for ninety-nine uses out of a hundred.

For the asking, you are welcome to use my knowledge. You can inform yourself fully on the whole big question of the use of cement for practically every use you are probably putting lumber to now. I will instruct you fully, in plain language, in the use of cement for making anything from a fence-post to a dairy-barn. And I can show you how to save money by using cement for any building purpose instead of using wood. Simply tell me your name and address and mention what sort of a structure you think of building or repairing—whether a residence, a poultry house, or even a drinking-trough.

You have nothing at all to pay for the advice and instruction I will promptly send you. Write to me before you buy another bill of lumber for any purpose. Be sure to.

Alfred Rogers
THE CEMENT MAN

Why not write me to-day? Accept my free services, make use of my knowledge to any extent; and you will not be under the least obligation or expense if you do. We want you to **KNOW** cement; and I will do all I can to help you **KNOW** it.

Verandas
Box Stalls
Driveways
Fence Posts
Well Curbs
Feed Yards
Barn Floors
Cellar Walls
Root Cellars
Horse Blocks
Chimney Caps
Chicken Houses
Watering Troughs
Curbs and Gutters
Windmill Foundations
Storage Water Tanks

Read This List of a Mere Few of the Uses Cement has on the Farm

Then write to me for particulars of how to build these things from cement—doing the work yourself, if you like, in spare time. Don't wait to write because you are not just ready to make any improvement to your buildings. Talk it over with me if you only need a few fence-posts or a watering-trough. Even on those small items I can save you considerable. Just write me.

ALFRED ROGERS THE CEMENT MAN
307 Stair Building, Toronto

