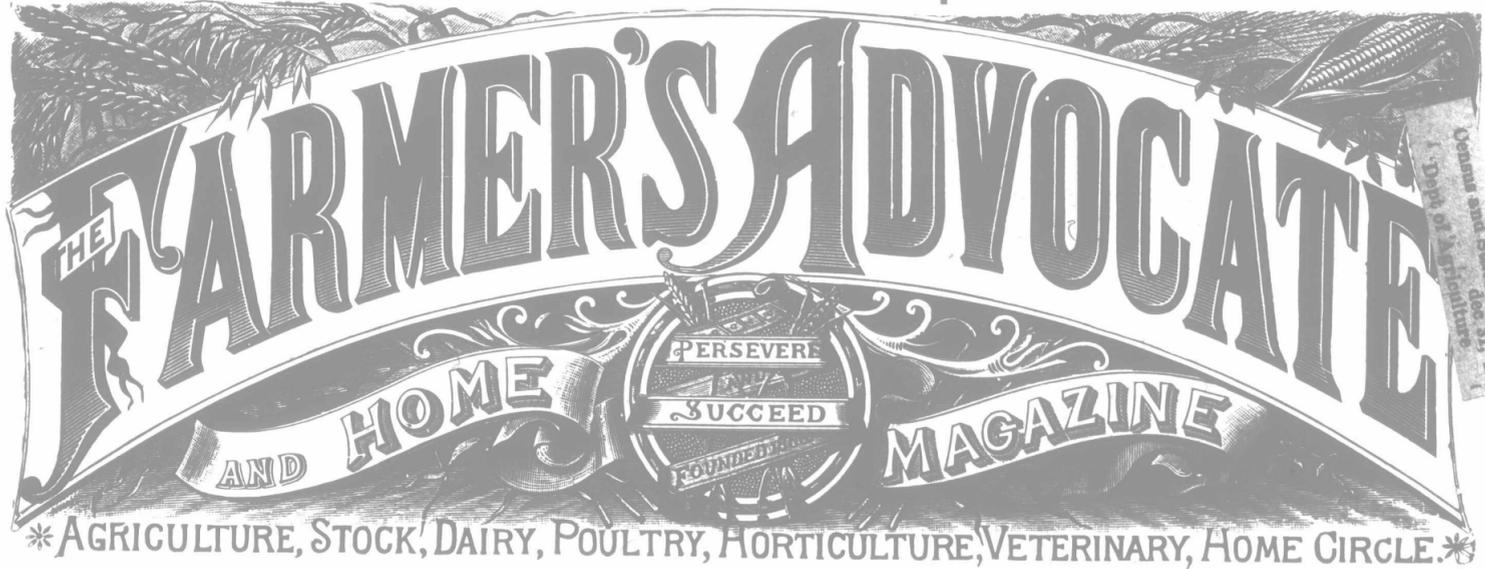


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Vol. XLVI.

LONDON, ONTARIO, SEPTEMBER 7, 1911.

No. 989

Once You Have Tried

PURITY FLOUR

You Will Readily
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More
It May
Cost.

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"MORE BREAD &

But **bulk** of product is not all you are to expect of **PURITY FLOUR**. You are to expect lighter, snowier bread; bread that has the nut-like, sweet, wholesome taste every housewife **tries** to put into the bread she bakes.

PURITY FLOUR, moreover, is not merely a **bread** flour. It is an **every-purpose** flour. It makes the kind of pastry you can be proud of—cake that invites praise—biscuits that suggest an encore.

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Begin with a small trial sack, if you are dubious. Your grocer can supply you.

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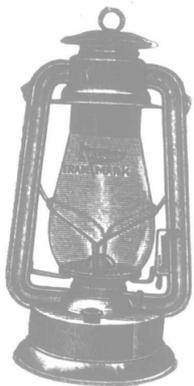


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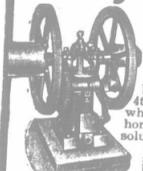
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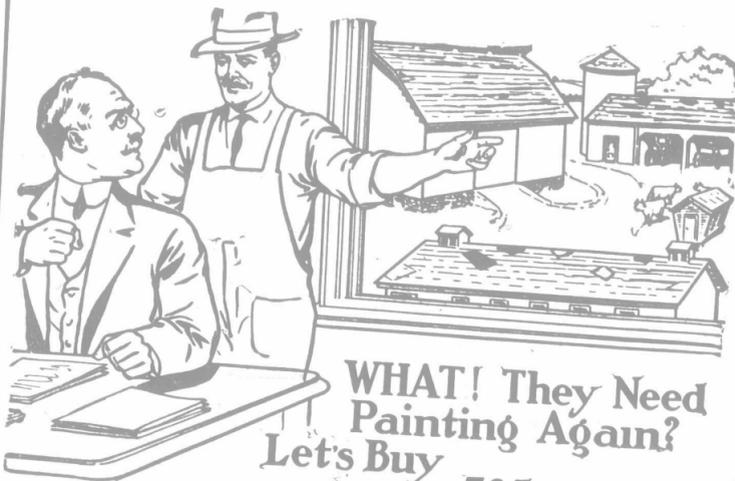
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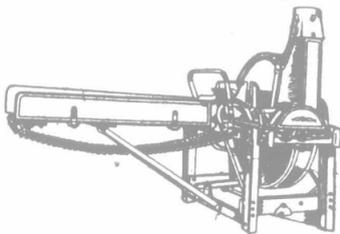
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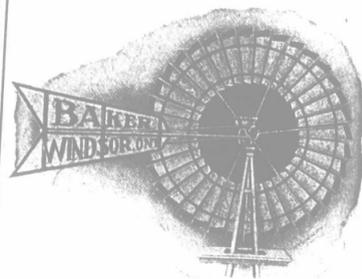
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Be sure to call on the IHC local agent. Get a pamphlet. Let him show you one of these wagons. If you prefer, write for literature or any other information you want to the International Harvester Company of America at nearest branch house.

EASTERN CANADIAN BRANCHES—International Harvester Company of America at Hamilton, Ont.; London, Ont.; Montreal, Que.; Ottawa, Ont.; St. John, N. B.

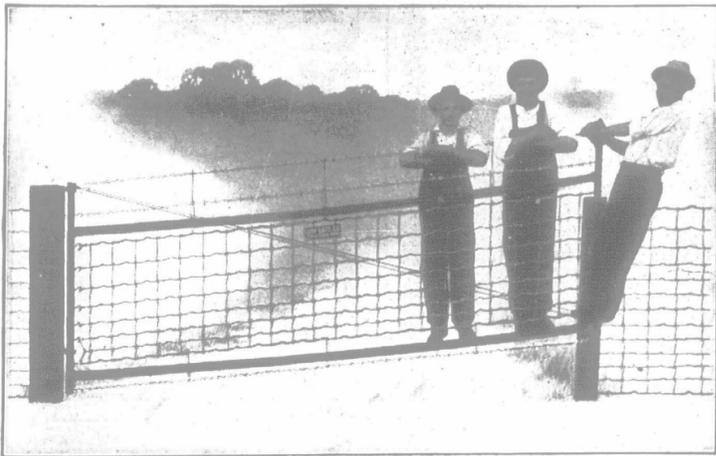
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Chicago USA



IHC Service Bureau

The bureau is a center, where the best ways of doing things on the farm, and data relating to its development, are collected and distributed free to everyone interested in agriculture. Every available source of information will be used in answering questions on all farm subjects. If the questions are sent to the IHC Service Bureau, they will receive prompt attention.

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Saves fuel because it extracts all the heat units possible.

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Distributes fresh warm air from all registers at once.

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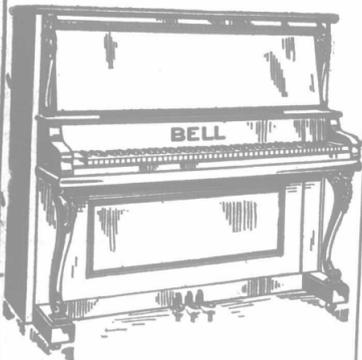
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It is a fact that the cows in a stable equipped with stanchions give more milk than the same cows in a stable with the old-fashioned ties.

CATTLE STANCHIONS

allow the cows more freedom. They do not worry, but devote all their time to the making of milk. You will be surprised at the increase in your profits after installing our stanchions.

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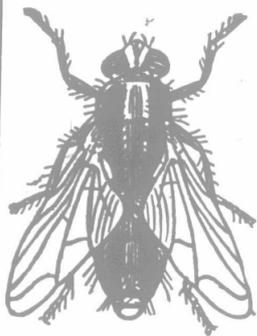
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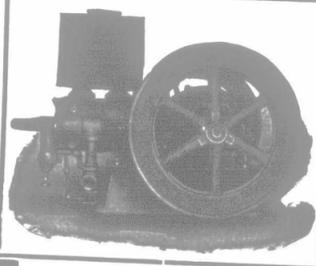
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are hatched in manure and revel in filth. Scientists have discovered that they are largely responsible for the spread of Tuberculosis, Typhoid, Diphtheria, Dysentery, Infantile Diseases of the Bowels, etc.

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Desk Weary? Get a Gun

From breakfast to the office and from the office back to supper, day after day—a monotonous grind. Get back to nature—back where the air is 100 per cent. pure and fairly reeks with health. Get away out where you can watch the sun rise over the marsh—where you can spend glorious, healthful hours punting slowly through the reeds in a bit of a flat boat for some shots at a bunch of fat mallards.

To reach Nature's wild things you must get where civilization isn't—and when you lose yourself in such a place with mind and eye constantly on the alert, and every muscle in play, you'll forget that you were ever in an office—you'll be nearer to the original man animal—nearer physical betterment and mental rest. This, a gun will do for you; and the best for solid satisfaction you can get is the

Tobin Simplex Gun

Made right here in Canada—every bit of it, from muzzle to butt-plate—it leads all others and we give you this added advantage: because we know what goes into the making of a Tobin Simplex, we guarantee it with a positive "money-back" guarantee that places us under an obligation to return you the full purchase price, if we cannot give you satisfaction in every way. Priced from \$20.00 to \$210.00. Let us send you our new catalogue. It contains good news for sportsmen.

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is the best on the market. See how it is designed. Grooved knives, with the grooves on one blade opposite the teeth on the next. Instead of slicing or pulping, the "Eureka" turns out roots in shreds—thin narrow strips—

suitable for any kind of feeding. The "Eureka" shreds from one to two bushels a minute, and turns so easily that a child can operate it.

In the "Eureka" the feed is kept free from dirt, the feeder bottom being made with iron rods, thus allowing all dirt to drop out before it can reach the shredding cylinder.

The sloping form of the cylinder makes the machine a self-cleaner. Write for catalogue which explains fully. **The Eureka Planter Co., Limited** Woodstock, Ont.



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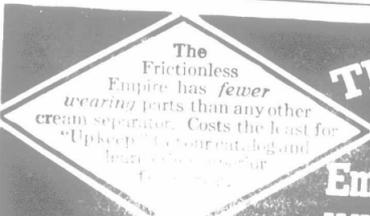
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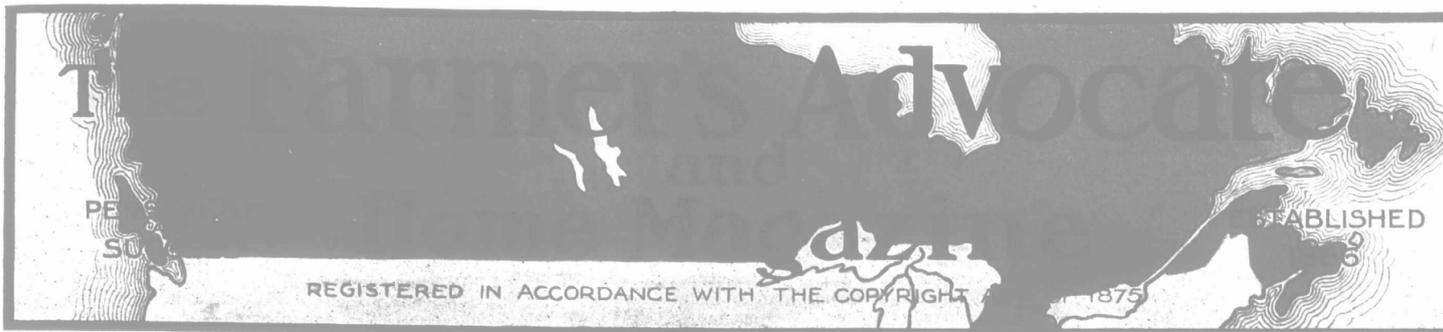
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The EMPIRE Line

"Everything that's good in Cream Separators"

Empire Cream Separator Company of Canada, Ltd.
WINNIPEG TORONTO SUSSEX, N.B.



EDITORIAL.

How are you preparing to return to the soil that fertility which has been taken from it by this season's crops?

We trust none of our readers will charge us with "offensive partisanship" if we remark that it would be a shame for reciprocity to be defeated, after all the extra barley threshing this year.

It is impossible to obtain something from nothing. By continuous cropping, we are skimming the cream from the fields, taking all that they will produce, and returning almost nothing to the soil. Such practice cannot endure. No matter how rich the soil may be, its fertility will wane in time.

Man's inhumanity to man makes countless thousands mourn. But that is nothing to man's inhumanity toward the dumb beasts that serve him and supply so many of his needs. Most men's interest in animals is principally commercial. Kindness for kindness' sake is still pretty rare. Even the Christian nations of the world are but partially civilized as yet.

All the modern improvements on threshing machines do not seem to shorten the dinner table very much. Indeed, but for a reduction of hands in the straw mow, it works the other way. Three men used to be sufficient to handle an outfit, but now that we have traction engines, self-feeders and blowers, some threshers carry a gang of four—one to look after the engine, another for the separator, one to take care of the blower, and a fourth to draw water, etc. It seems the more appliances we add, the more men are required to look after them.

An agriculturist, according to Horace Greely's definition, is a person who lives in the city, and who out of his city business can make money enough to enable him to own and operate a farm, and incidentally have time enough to advise the country farmers in general how to operate and manage farms; while a farmer is a man who lives in the country on his farm, runs and manages it successfully enough to enable him to support himself and family, and incidentally to produce surplus enough to support the city.

It is sometimes argued that a second chamber is necessary to hold radical legislation in check until the people are sure they want it, and that in the end their will prevails. In practical politics this imposes a tremendous handicap upon progressive measures. Even when the will of the people is unimpeded, it is difficult enough to get public opinion aroused to the reforming point on great moral issues where the individual voter is not selfishly concerned. How much more difficult to keep opinion roused and steadily supporting a party of progress through thick and thin, amid all the distractions of complex issues and warring candidates, with "red herrings" galore thrown across the trail! The will of the people should rule, and it is to the advantage of progress that it should rule promptly, with no irresponsible second chamber to oppose its measures and bulwark the privileges of corporate interests or selfish landed minorities.

Be Careful of the Straw.

In the rural grain-growing districts this is the season when the hum of the threshing machine can be heard on every hand. A few years ago, with the old-fashioned carriers, it was necessary to have several men on the stack or in the straw mow to get the straw far enough away to free the carriers; but now, with the machines fitted with wind-stackers, very few men, and very often an insufficient number, or none at all, are assigned to the caring for the straw, it being considered of little value. A few seasons of abundant moisture and heavy crops of straw have the effect of rendering the farmer somewhat indifferent with regard to the care of this by-product, as it were, of his field crops, but a year of short straw, such as many districts have experienced this season, makes it necessary that a little more care be taken to save the straw well, so that it is of most value to the stock and to the farm.

Why should straw be carefully handled to keep it? There are two or three very good reasons for this. Straw that has been cut at the proper stage is of some value as a feed, and since, as is the case this season, hay and some other roughages are a comparatively short crop, it may be necessary, and in many cases where not absolutely so, there may be quite an advantage to be gained from feeding a little straw. Straw has a low crude protein and fat content, and is high in fibre or cellulose material; consequently, it should be fed sparingly to animals at work or to fattening stock, but straw is often quite useful to carry idle or lightly-worked horses over winter, also cattle that are not being milked or fattened. In the feeding of a maintenance ration, heat is one of the main requirements of the animal, and the large amount of energy expended in masticating, digesting and passing the straw through the alimentary canal appears finally as heat, and helps to keep the body warm. Good straw contains nearly 1 pound of digestible crude protein, between 35 and 40 pounds of digestible carbohydrates, and about one-half pound of fat, to every 100 pounds.

While straw contains a certain amount of fertilizing constituents, it is of far greater value for this purpose when used to soak up and retain the liquid animal excrement from the stables and yards. If for no other reason than its use for this purpose, it should be carefully handled and not allowed to waste. The liquid manure contains a large proportion of the fertilizing constituents of the total amount of excreta, and, without some substance to soak it up and hold it, much of the most valuable manure is lost. Straw is the most effective sponge for the soaking up of this material, and should be handled so as to do this work most efficiently.

Again, there is nothing much more unsightly around the buildings than a pile of straw just blown into a promiscuous heap, with a number of peaks like a small mountain range, and the base surrounded with loose straw to the depth of several feet. For neatness alone it is profitable to carefully stack the straw.

There are two methods of keeping straw, viz., stacking, and keeping it in a mow or straw-shed. Undoubtedly, the latter is the better, for in this

case no rain can gain access to the straw, and it is preserved in as good a condition as when harvested. A little more dust will be held in it than where the straw is blown out on a stack, and the dust is carried away by the wind. However, many farmers are forced to stack some straw, and to those who are there can be no better advice than do it as carefully as you would a hay stack. Build it, tramp it, and take every possible precaution to save it, for water-soaked straw is of much less feeding value than good dry straw, loses some of its fertilizing value, and is so water-logged that it will not incorporate the liquid excrement so valuable as a manure, and is thus of little value for anything. If straw is of comparatively little value as a feed, it is all the more reason why it should be carefully handled, and the most made out of it both for feed and to prevent loss of valuable fertilizer.

Take a Course in Agriculture.

The time for the opening of the schools and colleges is fast approaching, and many young men now on the farms are considering the advisability of taking a college course. The young student about to enter upon a college or university course is often undecided as to what special line of study it would be best for him to follow. Every year, scores—yes, hundreds—of boys leave the farm to get an education, and most of them go to the universities, where they receive a learning which does not tend to give them the best impressions of farming as a profession. To the boy or young man who has any liking for the farm, and who is desirous of obtaining a good education which will be of practical use to him in the advancement of things pertaining to agriculture, no better course can be recommended than that which is outlined by the agricultural colleges. The great variety of problems which are involved in scientific agriculture makes it necessary that the person who chooses this as his life occupation have a wide and varied experience and knowledge in order to make the most out of it financially. But, apart altogether from things financial, the knowledge obtained will be of great value, because it enables the person to understand and appreciate the different phenomena of nature, as well as giving an insight into why certain things are so. Many of us know that various practices have given certain results, but few stop to ask why. It is when the man develops an inquiring mind that he begins to be a student. The agricultural college is a good place to arouse the curiosity, and the course is one which prepares the industrious student for his work when he leaves to put into practice what he has learned. A college course is merely a commencement in education. Its aim is to start people in the right direction and prepare them for their life-work, throughout which the person should be always learning something new. It is a sad case where education ceases when the college is left behind. All agree that a college course is a good thing, and, before entering upon it weigh the matter thoroughly, and, where conditions warrant it, take a course in agriculture. It is one of the most inexhaustible phases of learning, and will give the brightest student ample opportunity to exercise all his available gray matter.

THE FARMER'S ADVOCATE AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL
IN THE DOMINION.

PUBLISHED WEEKLY BY
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JOHN WELD, MANAGER.

Agents for "The Farmer's Advocate and Home Journal,"
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1. **THE FARMER'S ADVOCATE AND HOME MAGAZINE** is published every Thursday. It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
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HORSES.

Four of the most important parts of the horse are the feet, pasterns, shoulders and hocks.

Strive to produce the first-class animal. The really "top-notch" is always the horse that will find ready sale, at a high price.

It might be a good time just now to buy a few horses to fit for sale. The market demand is just a little quiet during this off season, and they can be bought at a reasonable price.

When buying a horse, insist upon seeing him move at the trot. Many animals will show a fairly good gait at the walk, but are disappointing when asked to go faster.

Buying a lame horse is always risky, and is especially to those not well versed in the causes and treatment of the lameness a dangerous practice.

Irregular feeding, both as to time and quantity is one of the quickest and surest methods of injuring the horse's digestion, and consequently impairing his usefulness.

Never rush the horse into heavy work immediately following a liberal feed. The work takes most of his energy, leaving little or none for the digestion of the food.

The slope of the pastern and the obliquity of shoulder have much to do with how the foot stands the pounding to which it is subjected on the hard roads and pavements.

Where it has not been possible to get the mare bred sooner, rather than miss the chance of getting a foal next year, breed her to produce a fall foal. Mares give the best satisfaction as breeders when kept breeding each year.

A horse will not live on concentrated feed alone, yet, in feeding him, it must be remembered that this material furnishes most of the nourishment, and that the roughage is largely used as a filler.

Every horse-owner likes a horse of good disposition. This is largely bred in the animal, but a great deal of it also depends on his care and treatment. A horse roughly used will usually develop a nervous, restless, and often even an ugly character, while a horse which has a somewhat bad temperament bred in him may be much improved by kind treatment.

Coarse hair on a draft horse's legs is an indication that the animal has a coarse skin and a comparatively soft, spongy bone which will not stand the hard strain to which it is subjected, as well as the clean, flat bone which usually accompanies fine, silky hair.

Insist upon the shoer taking pains with his work, and do not allow him to fit the foot to the shoe, but rather the shoe to the foot. Many a good foot has been ruined by careless and improper shoeing.

Level roads are sometimes hard on the driving horse, because inconsiderate drivers expect them to trot at a fast pace all the time, believing that it is only up or down hill that the horse should be permitted to walk. More miles will be covered, and with greater ease, if the animal is allowed to mix the pace.

Should the Stallion Work?

It is generally believed that, for the best development of an animal, exercise or work at the particular kind of labor for which the animal is best suited is necessary. In trotting and running horses, it is conceded by most students that fast work by ancestors tends—is, in fact, essential—to develop the greatest possible speed in the progeny. Breeders and promoters of race-horses would not think of breeding their mares to a stallion which had never shown by actual performance that he had speed enough to warrant the mating. If it is necessary that the light stallion be made to race in order that great speed may be developed, why is it not equally important that the sire intended to produce drafters be made to do some of this work to develop draft power? You may contend that speed and draft power are acquired characters, and cannot be transmitted to the offspring, but, when speed or draft power are developed from generation to generation, it is reasonable to conclude that they become so established as to affect the germ plasma or the reproductive cell, and that thus the character is passed on, not exactly as an acquired character, but as a constitutional character.

In the spring, for a few months, stallion owners are busy preparing their sires for the season. Every effort is put forth to place the horse in the most attractive condition and best bloom possible. But, after the season is over, and during the late summer and fall, what becomes of the stallion so well looked after during the spring and early summer? In many cases he will be found in a small, dark box stall or a little paddock where he is receiving little or no exercise, his ration is cut down, grooming has ceased, and he is largely left to take care of himself. This treatment has a marked reaction on the horse, which is suddenly reduced from the best of care and high feeding, with considerable exercise. Is such treatment best? The draft stallion is kept to be a sire of draft horses, and, to be able to sire drafters, he must be a superior draft horse himself. Can he be this if he does not receive regular exercise throughout the year? During the breeding season he has been well cared for and highly fed, and the matings make such demands on his vital forces that he should not work; but when the season is over the horse should be put to regular work, not heavy labor, but enough to keep his mind employed and divert his great amount of energy produced by the high feeding during the season. The stallion has had exercise every day during the breeding season, and so great is the change when the season is over and he is huddled up in his little stall, without any chance to move around, that very often he succumbs to disease brought on by these abnormal conditions. Nature never intended that the horse should receive such treatment. It is contrary to the laws of health and contrary to the functions of the draft horse to be kept in enforced idleness. Most heavy stallions are lazy, and will not take a reasonable amount of exercise, even if allowed the run of a fair-sized paddock, and the farm work usually takes all the time of the men, so the stallion is not exercised. Now, the best thing to do is to put him to work, and by so doing he will get the exercise so necessary to the maintenance of his vitality, and at the

same time will be paying for his keep by the work he is doing.

Every stallion that is to sire draft or work horses should be capable himself of doing the work that it will be necessary for his offspring to accomplish. He should be worked and fed like a work horse, according to his size and the work he is doing. Hard muscles, health and vigor are produced by work in the open air, and it is these that are required in the draft sire. A horse kept in condition throughout the year is sure to be a stronger, more virile animal than one kept under unfavorable conditions for the greater part of the year, and then highly fed and exercised throughout the short breeding season, only to relapse into the resting, uncared-for state as soon as this is over, treatment which he may stand for a time, but which is in the end bound to impair his usefulness.

There is every logical argument in favor of working the stallion between seasons. It keeps him contented, develops his muscle, allows him to pay for his keep during the off season, keeps his general health good, does not allow him to become fat or flabby, a condition which ruins many a good draft sire; keeps him vigorous and robust, and in a condition to go into service the following season with a better chance of getting a large number of good strong foals. Put the stallion to work and watch the results.

LIVE STOCK.

Replace the unsatisfactory individuals with young animals of the best type. High-priced feed is too expensive to feed to poor-doing stock.

A dry summer, with burnt pastures, always has a tendency to crowd the market with half-fat cattle.

At this season of the year many breeders are on the look-out for new sires. Never buy an inferior animal. Do not skimp on the price. A few extra dollars invested in a good sire will be money spent to the best advantage.

The spring calves will, by this time, be showing indications of their ability to grow rapidly and make good gains. Only those that have done the best should be kept as breeders, and the weedy specimens discarded.

Don't forget that manure plays an important part in the economic feeding of animals. It should be removed from the stables regularly and often, and should either be immediately applied to the soil or stored where there is as little danger as possible from loss.

Have you weaned the lambs yet? Many owners allow them to remain with the ewes too long. They get very little nourishment from them, but their incessant endeavor to get milk from scantily supplied udders is a great annoyance to the ewe, and keeps her from gaining in flesh.

Place the ewes on fresh pasture, and, if necessary, feed them a little grain. It always pays to have them in good condition and thriving at the time of turning the ram in with them. More and stronger lambs will result than from ewes thin and run down in flesh at the breeding season.

Few feeds are relished more by the sheep than is cabbage. It is especially valuable for the lambs after weaning and for the pens of show stock. Rape is also a very good feed for this purpose, and either one of them is excellent fall feed for the entire flock.

Do not sell off all the lambs. Keep a few of the best ewes to fill the places in the flock made vacant by the discarding of some of the older matrons that have outlived their usefulness as breeders. This weeding out and building up should be practiced yearly.

The early fall litters will soon be coming, and, to get the best results, the sow should be placed in the pen in which she is to be kept with the litter at least a week before the youngsters are expected. It would be better if she has access to an outside paddock.

This is the time of year when the fodder-corn crop can be used to good advantage. With a little pasture and liberal feeding of green corn, the cattle should keep in fair condition until time to begin stall-feeding. Too often the mistake is made of allowing them to fail in flesh just before stabling.

THE FARM

"Dry Farming."

There will be held at Colorado Springs, Colorado, U. S. A., beginning October 16th, two conventions that are of interest to farmers and their wives the world over. One is the International Dry-farming Congress, and the other is the International Congress of Farm Women. The former claims to be the largest and most active society in the world, with a propaganda devoted to better and more scientific agriculture, and the latter claims to be held under the first call ever made for an international gathering at which the problems of rural home life are to be the topics discussed.

Advocates of "dry-farming" are attempting to make of it a scientific term, and fling back at those who declare it a misnomer that there can be no such thing as farming without water, and it is gross ignorance to express such a thought. Approximately it takes 300 pounds of water to produce every pound of vegetable matter that grows, from a bunch of sage-brush to a geranium leaf, and nature only produces water in one way, viz., by precipitation. The precipitation that produces anything on the dry-land farm must have fallen at some time, although it may have been a half century ago. Therefore, they have built their theories largely around the conservation of moisture in the soil.

Dry-farming theories had been evolving for a good many years, and had acquired many advocates and something of a literature when the Congress was organized, five years ago. That body

land by keeping the top soil loose. This top soil, if loose, will not absorb the water below, no matter how much the hot winds blow over it. Let it become hard, and capillarity sets in. Maintaining this mulch involves harrowing or disking after heavy rains, and is a labor that the farmer in humid regions would probably avoid, no matter if it insured him against drouth.

Summer-fallow or tillage is the third great principle. In a general way, this means keeping a tract of land mulched and tilled for one or more seasons before planting it to a crop. The object is to secure two years' rain for that crop. Tillage is to keep down the weeds, which are great water consumers, and to maintain the mulch that will hold the water in the soil. This is a practice becoming very common in the wheat regions of Western Canada, where land is cheap and can be spared for crop production during a season.

Subsoil packing is particularly advocated by H. W. Campbell, after whom the dry-farming business is sometimes named. This is pressing the overturned soil upon the subsoil beneath. One object is to set up capillarity, and the other to gain a firm seed-bed. It is particularly advantageous where the soil is very light. A simple illustration will explain the mulching and subsoil packing, as some people are confused by the necessity of loosening the soil in one instance and packing it in the other. Take a lump of sugar and soak it in water. This is the subsoil. Lay a second lump upon it lightly, and call this the plowed ground. Water from the lower lump of sugar will not begin to rise in the second lump until it is pressed down. The subsoil packer is supposed to act in the same way with the plowed soil on the subsoil. Now take a bit of powdered sugar and

sprinkle over the top lump, and the mulch has been provided. Keep the mulch light and the water remains below, where the wind cannot evaporate it; but let it get hard and caked, and the breath may be used to draw out the moisture.

Men are thinking about agriculture as never before, and the U. S. Department of Agriculture is doing a splendid work. Some of this is in the line of helping to develop indigenous crops in the dry sections. The grain sorghums are among these—kafir corn, Milo, kowliangs, etc., that grow under great drouth conditions, and feed to stock nearly as strongly as does corn. Spanish peanuts grow in almost desert soil, and

furnish both hay and fattening rations for stock. Dry-land alfalfa, corn, and even fruits are being propagated. It seems to be merely a question of developing plants and seeds suited to short seasons and the variations of altitude and latitude, and these appear to be coming along with reasonable speed.

It is said that 35 per cent. of the tillable land of the earth now feeds the people under humid conditions. If the contentions of the dry-farming theorists are right, then this same soil could feed twice as many, because in very few regions do the farmers take out half that could be taken, and put back only a small portion of what they take out. Many of the new soils of the Western world are said to be worn out, and yet there are other lands where the soil has been farmed for thousands of years. So the dry-farmers advocate rotation of crops and other methods of preserving the soil or restoring it.

There are lessons in this that the man located in a region where the rainfall usually comes just right in the growing season may take to heart. He knows there may be a time when the rains fall; he knows that his "money" crops should be of various kinds; that he should give to every farming operation all the thought and effort that he is capable of. So there may be profit in getting in touch with these dry-farmers, intense, aggressive as they are in disseminating the doctrine. Of course, the best way would be to go to the Congress itself.

The Women's Congress is the outgrowth of former President Roosevelt's rural-life commission.

Don't feed the sow too heavily soon after farrowing, especially if she is a heavy milker and has a comparatively small litter. Many young pigs are lost by becoming overfat, due to this cause, coupled with lack of exercise.

In pasturing hogs, whether it be on rape, clover or other pasture, it is generally found advantageous to use hurdles. In this way the pigs are kept clean, and their feed is also kept fresh, and not so much is lost from taint or becoming stale, due to the animals tramping over it and depositing excreta.

A Good Sire Invaluable.

The real value of an exceptionally high-class sire cannot be definitely estimated. It is something which lives not for one generation only, but is an influence which will be apparent for years to come. The Clydesdale breed of horses has had several outstanding sires, such as Prince of Wales, Darnley, Baron's Pride, etc., and their progeny have been in many cases great animals, which have passed on generation after generation their superior qualities. Who can estimate the value of these sires to the breed? Every breed of live stock has its notable sires, animals which have been largely responsible for the high degree of excellence that the respective breeds have attained. In fact, it is only the best sires that count for anything in the making and improving of the breeds. In selecting sires, it must be remembered that one of indifferent breeding value is capable of doing just as much harm in the stud, herd or flock as the high-class sire can do good. We cannot get away from inheritance in breeding, and just as surely as a defective sire is used, so surely will his same defects show in his offspring, and so on throughout the breeding career of the strain. The kind of sires that the breeder uses determines what his success will be in his business, and good success can only come from the use of the very best obtainable males. Do not think that one good sire is all that is necessary; that will only last a few years, and that when his period of usefulness is over, his place should always be filled by one of better conformation and breeding. Follow a system of improvement in selecting sires, and never deviate from it. Fix in your mind the type required, and stick to it until it is a realization.

More About Tuberculosis.

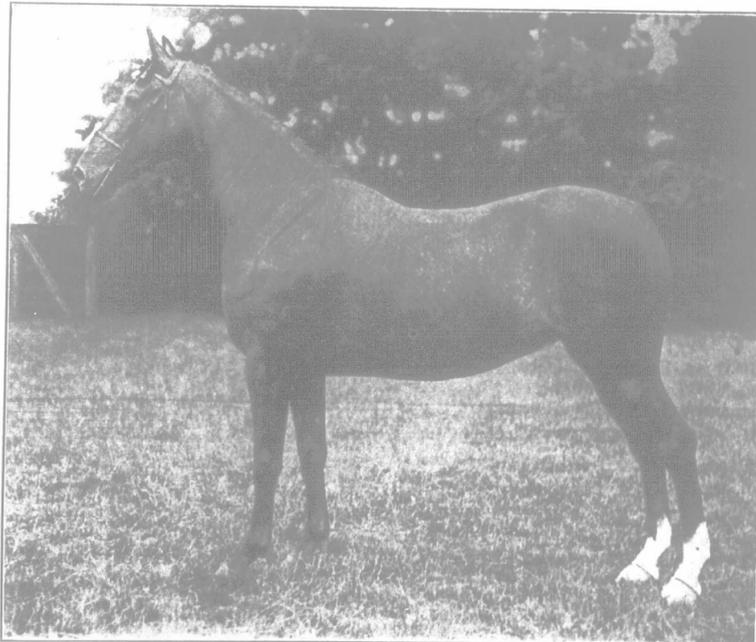
The Royal Commission, appointed to inquire into the relations of Human and Animal Tuberculosis found that the milk of tuberculous cows not containing bacilli as it leaves the udder, may and frequently does become infective by being contaminated with the faeces or uterine discharges of such diseased animals. Measures for securing the prevention of ingestion of living bovine tubercle bacilli with milk would greatly reduce the number of cases of abdominal and cervical gland tuberculosis in children, and such measures should include the exclusion from the food supply of the milk of the recognizably tuberculous cow, irrespective of the site of the disease, whether in the udder or in the internal organs. This goes to show the need of sanitary conditions in the stable, as well as the danger from cows affected with this loathsome disease. Stockmen and dairymen cannot be too careful, in buying new stock, not to get diseased animals; and, in the care of the milk, every possible effort should be put forth that milk which may be free from germs the moment it leaves the udder, does not, by reason of carelessness, filth, or bad handling, become laden with these deadly organisms, and thus imperil the life of the infant consumer.

The Hog Deserves Good Feed.

The hog makes a profit for his owner by paying a much better return for feed of inferior quality than could be obtained by the sale of this feed. Some persons seem to think that the main purpose of the hog is to utilize waste and unsalable products. Where such substances are on hand, it is good practice to feed them to the pigs, but, when the hogs will yield a good profit upon other and more valuable feeds, it is advisable to keep more of them, and not confine the hog industry to producing a few hogs on the waste material. Not only should more hogs be kept, but better hogs, and better methods of feeding and management should be followed.

Reliable Information.

I have taken your paper for a few years, and I know of no other paper that gives such reliable information as the old "Farmer's Advocate," and no farmer should be without it for the sake of \$1.50. S. B. SHIER. Ontario Co., Ont.



Beckingham Czarina. Hackney filly; three years old. First and champion, Royal Show, 1911.

has been persistent and energetic, and to-day the Congress is the largest volunteer gathering held each year in the West. It has a membership of 15,000 paid-up subscribers, and branches in Brazil, Australia, South Africa, Europe and Canada. Also, it now maintains a big exposition of dry-farmed products each fall. The exposition and the headquarters of the Congress always follow the place selected for the annual meeting, and it may be of interest to state that Lethbridge, Alberta, expects to capture the next Congress, and is making a considerable effort in that direction.

It is the declaration of dry-farming advocates that the practices are as applicable and necessary in humid regions as they are on the dry lands, and that drouth, such as was witnessed in a large part of the world this year, would have little effect if the land was farmed as they teach that it should be. An examination of the tenets of the doctrine may be instructive.

Deep plowing seems to be the cardinal principle, and the reason is that the humus or vegetable mold upon which the plants feed is turned under to rot, and as many inches of under soil should be brought to the air and sunshine as possible. Also, deep plowing furnishes a greater reservoir for catching and holding the water that falls. The principal plan advanced for holding this water is by "mulching." The soil beneath a log that has long lain on the ground is moist, for the reason that the wind and sun have not been able to reach and evaporate the water. That constitutes a mulch, and the dry-farmers are able to show that this can be done over a large area of

That body visited all sections of the United States three years ago, and then reported that reforms must start in the home life. The women in the Congress have taken this as the keynote, and have asked members of the Commission and others to lead the discussions on a four days' programme. These discussions will be watched with interest, to determine if any practical results can be traced to them. Unquestionably, the farm women have their problems, but how much can a Congress do to settle them?

Both Saskatchewan and Alberta will send Provincial displays to the exposition, and McLeod, Taber and Lethbridge will send Board of Trade exhibits. Ministers of Agriculture, J. E. Caron, of Quebec; W. R. Motherwell, of Saskatchewan, and Duncan Marshall, of Alberta, are expected to attend the Congress.

H. S. ROGERS,
Manager Publicity Department.

Red Clover.

"Red Clover" is the title of a bulletin issued by the United States Department of Agriculture, and written by J. M. Westgate and F. H. Hillman, of the Bureau of Plant Industry.

Red clover is said to be the cornerstone of agriculture in the North Central and Eastern States, and what is true of them is also true of a large section of Canada. It has at least four uses on the farm, viz., as a hay crop, a pasture crop, a soiling crop, or a crop for green manuring. The most serious problem confronting the farmer in many clover sections is the increasing difficulty of successfully maintaining stands of clover on the farm. Continuous cropping causes a depletion of the soil humus and plant food, which increases the difficulty of growing clover. This is a condition which must be solved, because the loss of clover from the rotation leads rapidly to a run-down farm. The mere introduction of red clover into the farm rotation is not in itself sufficient procedure to maintain indefinitely the productivity of the farm. The clover plant adds nitrogen, which stimulates the soil to increased yields temporarily, but other fertilizer must be added, or the field will eventually be depleted in fertility.

To get a good stand of the crop, it is necessary to sow only the best of seed. Good, plump, bright, medium to large-sized, uniform seed, free from adulterants or any kind of noxious weed seeds, is the only kind to rely upon to produce a crop. Home-grown seed has several advantages. It is suited to the climatic conditions, does not contain impurities foreign to the neighborhood, and can be selected from fields known to be clean. Great care should be taken in purchasing seed of unknown origin that noxious weeds are not introduced, and too much care cannot be exercised in cleaning and preparing the seed for sowing. It is generally advisable, before sowing, to make a germination test, which can be done by placing a counted number of seeds between the layers of damp blotting paper, and the amount of true clover germinating is easily determined.

Red clover will grow on any deep soil that has in it sufficient nitrogen to start the young plants, and also enough humus to insure a stand. It does not succeed on wet, poorly-drained or boggy land. In order to make its best growth, it must be supplied with nitrogen-gathering bacteria on its roots. On soil on which clover has been previously grown, inoculation is not necessary, but where the land has not previously produced a clover crop, inoculation is considered advisable. This can be accomplished by using a pure culture of these organisms, or by transferring soil containing them from a field on which red clover has been successfully grown, to the newly-seeded field, at the rate of from 200 to 300 pounds per acre.

The seeding is usually done with a nurse crop of some cereal, and all sown in the spring. This method has two advantages. The grain crop is produced, avoiding the loss of the use of the land for a season, and the stubble serves as a protection during the winter.

In the Northern States some farmers practice seeding the clover alone, any time from early spring until August 15th, and find it much more certain of producing a crop.

A top-dressing of barnyard manure acts very favorably on red clover at any time. Gypsum, applied when the plants are about six inches high, is often beneficial when the clover lacks vigor.

It is not advisable to pasture spring seedlings the same season, as the young plants are injured by such practice. Common red clover usually lives but two years. The second season the first crop is usually cut for hay, and the second crop for seed. In sections where the season is not long enough to permit of this, the first crop may be pastured, and the mower run over it early, so as to allow plenty of time to insure a crop of early ripening seed.

Red clover has a variety of uses where stock is kept. When cut at the right stage, which is at or just past full bloom, and carefully cured and harvested so as to retain most of the leaves,

which contain a larger percentage of protein than the stems, it makes the best of hay. It makes an excellent pasture for all classes of stock, and is very valuable as a roughage feed of high protein content. It is not advisable to use it for silage where it can be pastured or made into good hay, but, in cases of inclement weather at haying it may be ensiled, mixed with other grasses or corn. It is a suitable crop when grown in mixtures with other clovers and grasses, and works in well with short rotations, where it aids in keeping up soil fertility, and the roots, besides their fertilizing value, keep the soil in good condition.

In handling clover for seed, the first crop must be cut early. Only a medium growth of the plant is required to produce the largest quantity of the best seed. Clipping the clover after early summer pasturing is a good practice where seed is the main crop grown. This insures a seed crop which will mature better and more evenly, and to some extent avoids the ravages of injurious insects.

Under normal conditions clover should be cut for seed when most of the heads have turned dark brown and a large percentage of the seed has reached the dough stage. If left too late, the heads become brittle and break up; if cut sooner, light, shrivelled seed will likely result. Some farmers use a mower, with a buncher attached; others use a self-rake reaper, which proves very satisfactory for this purpose, while many mow it down and rake it up like hay. It is necessary that the crop be well dried before it is hauled, or it will not thresh well. The only thoroughly satisfactory machine to thresh clover is the clover-huller. It is sometimes threshed with a grain thresher having a clover attachment, but this is less satisfactory. Dry or cold weather is necessary for best results, as a humid atmosphere toughens the clover, and the seed is hard to hull.

The straw is of comparatively little use for feed after being threshed, but cattle and sheep will pick it over, and it may be scattered back on the fields or used as an absorbent for liquid manures.

Creosoting Posts and Silo Staves.

Editor "The Farmer's Advocate":

Since my first article on preserving farm timbers appeared, in "The Farmer's Advocate" of January 5th, 1911, I have received inquiries, the answers to which may be interesting and useful to other readers:

1. We are splitting 200 fence posts, mostly chestnut, with anchor posts of white oak. What preservative treatment would you use, and how would you apply it?

2. What preservative treatment could be used on the inside of a plank silo?

Ans.—1. Chestnut and white oak are naturally very durable woods, and the idea of preservative treatment is to allow the use of cheap woods, such as poplar, beech or maple, and to render them as serviceable as the more expensive chestnut and oak. But, as one year's extra life is sufficient to pay for the cost of treatment, it will pay to treat these posts.

As there are only 200 posts, you may not care to purchase the apparatus described in a former issue of this journal. In this case it would be better to use the "brush treatment," which, while not so good as "tank treatment," is far better than none.

First, have the posts thoroughly seasoned, with the bark off. Oil applied to green parts will not penetrate, and the posts check in drying, thus opening up cracks through the antiseptic zone, and enabling the germs of decay to gain access to the interior of the post. No matter whether posts are treated or not, they should never be set until well seasoned for at least three months. Checks in seasoned posts are closed by rain, and if the posts are wet when treated, the checks are missed; they reopen when the posts dry, and expose untreated surfaces.

For 200 posts, buy about 25 gallons of creosote, or "dead oil of tar," as it may be known. This should cost about 10 cents a gallon, and should be procurable through hardware stores.

Treat the posts on a warm day. Have them piled on slabs clear of the ground. Heat the creosote in a kettle to a temperature of about 220 degrees F., and paint it on the posts with a wide brush, covering the whole butt to a distance of six inches or one foot above the ground line. Be sure to get the creosote in every crack and hole, so that it form a complete film around the post. On the depends the success of the treatment.

For convenience in painting, pour the creosote from the heating kettle into pails. Do not allow the creosote to get below 200 degrees F. The creosote should always be thoroughly liquid. As soon as the posts have been painted, apply a second coat.

For a penetration of creosote into the wood, vary the concentration of creosote into oil from one to one-sixteenth to one-quarter. For the best results, men should paint sixty posts per hour, using a brush and one turn of the brush. The cost per foot would probably be in the neighborhood of two to three cents.

each, allowing for labor. This cost would easily be made up by the increased life of the posts.

2. The treatment recommended above for posts would be best for the staves of a wooden silo. As silo timber is rather expensive, and is very much exposed to decay, owing to the dampness and heat of the silage, it would certainly pay to treat it.

Buy one gallon of creosote for every thirty square feet of surface to be treated. This is sufficient for two coats. Apply in the same manner as directed for posts. Wherever it is desired to give the creosote a color, mix with each gallon eight to ten ounces of color ground in oil, together with an equal bulk (8 to 10 ounces) of linseed oil.

H. R. MacMILLAN,
Dominion Forest Service.

Something More About Stooking.

One good feature of "The Farmer's Advocate" is its way of allowing the discussion of all phases of a question. This feature is exemplified in the matter now under discussion. In your issue of August 24th, a correspondent, under the title, "Too Much Haste in Stooking," draws attention to one purpose of stooking grain, namely, the drying of the sheaves, in order that they may be preserved in the mow in a wholesome condition. If this were the only reason for stooking grain, the present writer would enter no word of protest. But is drying of the sheaves the only object in stooking? Surely not. The main reason for stooking the sheaves is the full maturing of the grain. For various reasons, grain is cut while still somewhat immature, the farmer knowing that there is sufficient nourishment in the straw to bring the grain to maturity. Since the maturing of the grain is so important a consideration, is it not important that the sap should be absorbed by the maturing grain, rather than evaporated rapidly by unnecessary exposure to the sun and wind? Leaving the grain unstooked, and thus unprotected from the harvest sun and wind, is the very best method of unduly hastening this hurtful evaporation. Further, it is important that the grain in the sheaf should mature uniformly, and this it cannot do when one-half of the sheaf is exposed to the sun, and the other exposed to the moisture of the ground. Further, there is one stage in the work of stooking that is very important, though too often neglected, namely, capping the stook. Capping prevents too ready evaporation going on in the whole or part of the sheaf-head, and thus permits the grain to mature, rather than to dry out and remain deprived of its last stage of development. Capping the stooks causes the grain to test well. Should the season prove a catchy one, the cap-sheaves will be beneficial in shedding a deal of rain, and any farmer knows the value of such a benefit. Your correspondent has put your readers under a debt of gratitude by calling attention to the importance of stooking. This article simply emphasizes another aspect of this important part of harvesting.

J. K.

POULTRY.

Blackhead in Turkeys.

Many inquiries have come to this office from time to time about this disease, and a few points from A. G. Gilbert's address on this subject before the select standing committee on agriculture and colonization may be of value to some of our readers.

"Blackhead is a disease that has destroyed turkeys in every part of the world. Blackhead is caused by germs that have been permitted to gain ascendancy over the vitality of the fowls. So long as the turkeys are strong and vigorous, they were able to contend against this bacterium without being injured by it, but, as the result of careless inbreeding, neglect of stock, filthy surroundings, attempting to grow hogs, sheep, chickens, cows and turkeys on the same piece of ground, the constitution of the turkeys has been weakened to such an extent that they cannot resist the onslaught of the disease. There is no cure for blackhead, except to weed out the birds that are attacked by it, bring in new stock, clean up the premises, and create sanitary conditions that will foster the growth of the turkeys."

The symptoms of the disease are as follows:

1. Lack of appetite, weakness, emaciation.
2. Constant diarrhea, usually from the first. This diarrhea is caused by inflammation of the caeca.
3. Half stupor, with an inclination to keep away from the rest of the flock.
4. In most instances discoloration of the head as the disease advances, hence the name "black-head," but this is not strictly correct, as the discoloration is not always present.

An alarming feature of the disease is that it is not until it has got firm hold of the bird that signs of sickness may be observed. It is then too late to save the turkey. The disease makes great headway in the midsummer months; actively

so if the season be damp. Young turkeys are most susceptible, although the disease attacks turkeys of all ages. With drooping wings and head, and tottering gait, the sick bird previous to death presents a truly pitiable appearance.

No cure has yet been discovered, according to Mr. Gilbert. Some means of checking the disease have been found, but nothing has been discovered so far which could be positively stated to be a sure preventive. Too much stress cannot possibly be laid upon cleanliness. Disease may be prevented by rigid methods of cleanliness, but, in spite of all that, this particular disease is so widespread that we have every reason to believe that it is not confined to turkeys, but some authorities say that it is also found in fowls and chickens. Preventive measures:

1. Careful inspection of all new stock. The new stock should be purchased where the disease has never made its appearance.
2. The turkeys should be kept, if at all possible, by themselves. Give them fresh ground every two years.
3. Every bird should be kept under strict observation. A bird showing the slightest sign of sickness should at once be isolated and closely watched.
4. Yards and premises should be kept free as possible from English sparrows, and the poultry house from rats and mice. It has been shown at the Rhode Island Station that these rodents carry the parasite.
5. Fatten birds slowly. Heavy feeding does not cause blackhead, but it does frequently cause the sudden death of a bird in which the disease is present.
6. If a bird dies of blackhead, it should be promptly burned or buried; better to be burned.

Some Recommended Remedies.—As previously stated, advanced cases of blackhead are considered incurable, and it is only waste of time and effort to attempt to cure a badly-affected bird. John Baynes, of the Agricultural College, Truro, N. S., recommends the following remedies:

1. Sulphur 5 grains, sulphate of iron 1 grain, and sulphate of quinine 3 grains.
2. Sulphate of iron $\frac{1}{2}$ grain, salicylate of soda 3 grains.
3. Benzö-naphthol 1 grain, salicylate of soda 1 grain.

Another remedy is 1 teaspoonful of muriatic acid to a pint of drinking water.

In each of the three former cases the dose should be administered at night, or, in acute cases, night and morning.

It is necessary that the owner or attendant pay particular attention to the turkeys from time to time, and, in case any suspicion of the presence of the disease is aroused, such birds should be immediately isolated from the flock and treated, and the poultry houses should be disinfected, and everything possible done to promote the health of the flock.

Getting Ready for the Big Prices.

The wide-awake poultryman is busy getting his hens ready for winter laying, and making preparations for his hatching eggs for next season. For one thing, he has separated the pullets from the cockerels. The best cockerels, from which he hopes to make his selections for breeders are in a pen by themselves, reserved for further culling. The obviously inferior cockerels that have already manifested their unfitness for breeding are being fattened, either in the fattening coop or in some cool, dark, well-ventilated quarters, where they remain practically undisturbed. The old hens are similarly situated, for old hens are not paying winter layers. The pullets are being fed all they can stand of a good ration composed largely of oats, either whole or ground. Plenty of pure water and grit and oyster-shell are well within reach. Shade is to be had in abundance. Plenty of road dust is being laid away for the winter dust-bath, and, as important a thing as anything, the house is being thoroughly cleaned and sprayed with a mixture of good whitewash, carbolic acid and coal oil. It will pay to take down nests, roosts, feed boxes, dust boxes, and everything else movable, and spray and wash; twice, at least, with an interval of a week between sprayings, has this thorough spraying been done. The droppings board has been thoroughly repaired, and every leak in the roof has been repaired. The ventilators have been seen to, and every precaution taken to make the hens clean and dry and vermin-proof, as dampness and vermin are the sworn foes of profitable poultry raising.

The hens for next season's breeding are given as easy a time as possible. They are recommended to go to the dressmaker any time. Their diet consists mainly of what they can pick up and of rolled oats. For a few months they will serve their owner best by resting and building up for their approaching busy season. The Biddy who in the hatching season gives plenty of strong-germed eggs, does well enough without laying the rest of the year.

Again, the Easter chicken market must be pro-

vided for. This is being done by hatching chickens late in August or in September, keeping them hardy till snow flies, then keeping them in a cool, dry house till March, and then, when they have built up a vigorous, large frame, putting them into the coop, and rushing them forward as quickly as possible. These are the days to get ready for profits in poultry. J. K.

Electrical Incubation.

Our Australian correspondent writes that some very interesting experiments are being conducted at Hawkesbury Agricultural College, N. S. W., regarding the application of electricity to egg incubation. It is proved conclusively that the chicks so hatched are much stronger than those produced by lamp incubation. The heat in the incubator is generated by allowing the current to pass through a great length of fine wire, which offers considerable resistance to the flow of electricity. This wire is passed through the incubator or brooder. As there is only a slight warming, there is no danger of fire. The wire can be so arranged as to give both top and bottom heat. It was found that in the electric machine the chicks chipped and left the shell in from one-half to one-third the time occupied in the lamp incubator. The college had no cases of chicks chipping and being unable to leave the shell, nor any cases of the shell sticking to the chicks, in the electric machine. The chicks left the machine and dried quickly, and were lively and strong from the moment of birth. This was so much in evidence, in comparison with the lamp incubator that during the second test it was decided to examine all eggs thrown out by the fertility test. An examination of these eggs showed that only two—one from each machine—were really infertile. In all other cases the germ had started. The average age of the embryo with the electrically-treated eggs was three to five days; with the lamp eggs, not above two days. The expert in charge thinks that if the electric machines will carry the embryo further than the lamp, that it is quite possible a slight modification will bring them to maturity, and thus greatly increase the percentage of the hatch. Trials will, therefore, be made in that direction. He is inclined to think that the quality of the air used in the ventilation will prove the most important factor in the results, not that the electricity in itself has any really direct effect. In this year's experiments the college will (1) run an oil engine, an electric machine, and broody hens, in comparison; the growth of the chicks will be watched up to six months; (2) test the value of a fluctuating temperature in the incubator; (3) test the value of air drawn from outside the incubator room for ventilation; and (4) test the effect of minute traces of kerosene and lamp fumes on the chick-embryo during the first six days of its development.

[Note.—Electric incubation has been tried at the Dominion Experimental Farms, where A. G. Gilbert, the Poultry Manager, reports it a success. It has never been tried at the Poultry Department of the Ontario Agricultural College, because of the uncertain electric current there. Prof. Elford, of Macdonald College, tried electrical incubators for several years, but the results were not encouraging, and the same results were obtained at Montana Agricultural College. The results, on the whole, seem to be rather varied, and, considering that farmers as a rule do not have electricity—and if they did, very few of them are mechanical enough to manipulate one of these machines—electrical incubation, if satisfactory, cannot come into general use for some time yet. However, further experiments in this direction will be watched with some interest by poultrymen.—Editor.]

Production of Winter Eggs.

It will be well for poultrymen to realize sooner, rather than later, that in the artificial treatment of their fowls during the winter season they must imitate, as nearly as possible, natural conditions. The hen, when running abroad during the summer season, supplies herself with material to make the yolk and white of the egg, lime to make shell, grit to grind up the food in her gizzard and to keep herself in robust health. In picking up this variety of diet, she has to make some effort, which means exercise. She keeps her body almost free from lice by vigorously dusting in dry and fine earth, preferably road dust. She exhibits a decided preference for roosting in the branches of trees, where she can have plenty of fresh air, rather than going into a stuffy poultry house, and the foregoing should be a lesson as to the proper feeding treatment and housing of birds. The nearer the natural condition is approached in the feeding of our fowls, the greater will be the success. If it were easy to get eggs in winter, they would not be so high priced; but, because skill is required, few eggs are produced.

The following rations have been found effective in the winter production of eggs. For hopper or dry feeding in unheated houses: Hens—2 parts

bran, 1 part ground oats, 10 per cent. charcoal; and for pullets add 1 part of corn meal. A distinction is made between the feed of hens and that of pullets, because feed that agrees well with the pullet may make hens between 18 months and 2 years old too fat. A whole-grain ration which has been found to be a good egg producer is one-third wheat, one-third buckwheat, and one-third oats, fed in conjunction with roots, cut bone and grit, at the rate of 3 to 5 pounds per day to 24 hens.

Another good ration is wheat or buckwheat scattered in the litter on the floor of the poultry house or scratching-shed in the morning, eight to ten pounds to 100 hens. At noon feed steamed lawn clippings or clover hay three or four times per week; and, if thought necessary, give, in addition, 5 pounds of oats to 100 hens. This should also be scattered in the litter. Mash composed of such ground grains as are most abundant, with waste of kitchen and table. Mix these with hot water, and feed when cool two or three ounces to each hen. Shorts 2 parts, ground oats 1 part, and corn meal 1 part, ground and mixed with one part of meat meal, have been found effective.

The following points are indispensable in the winter production of eggs:

1. Rations should be varied, and fed regularly.
2. The flock should be built up by breeding from the best egg-layers of a prolific, egg-laying strain of fowls.
3. The poultry house should be wholesome and dry, kept scrupulously clean, free from vermin, with the hens cleanly fed, and the nests equally clean.

In all cases, grain should be scattered in the litter on the floor in small quantity morning and evening, to incite to exercise in scratching for it. Pullets can be given cracked corn at one of the daily grain rations. Cut green bone in proportion of 1 pound to 15 or 16 hens every second day, should not be omitted. With a good, generous ration, no stimulant, as pepper, is required. The great aim and object should be to keep the fowls in robust condition, and, to do this, grit, fresh air, exercise, good clean feed, and clean buildings, are necessary.—[Notes from A. G. Gilbert's bulletin on "The Production of Eggs in Winter."

Saving Money on Farm Eggs.

Improper and antiquated methods of handling eggs in the United States result in losses that reach an estimated total of \$45,000,000 annually. This is 17 per cent. of the estimated total value of the entire crop. Practically all this loss is borne by farmers and other producers, and a large part of it can be prevented. How the Department of Agriculture, through its Bureau of Animal Industry, is solving this problem, is told in Bulletin 141, just issued, entitled, "The Improvement of the Farm Egg."

In order to show how this loss might be prevented, the Bureau of Animal Industry last year sent experts into Kansas to conduct investigations. The results of the first season's work are given in detail in the bulletin, with suggestions for improvement that might be applied anywhere. "Although but one season has been spent by the Bureau in this work," says the bulletin, "several much-desired changes have been brought about. The most important of these was the adoption by the shippers of the 'loss-off' system of buying and selling eggs."

Previous to the work of the Bureau, Kansas eggs were not very popular in the markets outside the State. Quantity, rather than quality, was a handicap the shippers encountered. The immediate effect of buying on a "loss-off" system produced such a marked change in the quality of the eggs reaching the market that outside buyers now manifest a preference for eggs bought in this manner.

Copies of the bulletin may be procured by addressing a request to the Secretary of Agriculture, Washington, D. C.

The Best Published.

"The Farmer's Advocate" has been taken in our house for a number of years, and we would not like to do without it. I consider it the best agricultural paper published, and think it should be in every farm home. Wishing "The Farmer's Advocate" every success. ALEX. CAMERON, Lanark Co., Ont.

Enclosed please find remittance covering my renewal, and also a year's subscription for one new subscriber. I am making this party a present of "The Farmer's Advocate," as I think it the best paper for the money I ever took, and every farmer should have it, and read it from start to finish. HOWARD BLIGH, King's Co., N. S.

GARDEN & ORCHARD

The Lake Ontario Apple Belt.

(Concluded from last issue, page 1435.)

The first orchard in this district dates back to the time when Richard Lovekin planted six acres of seedlings among the stumps on the farm which has been in the Lovekin family for 118 years. Farmers came from all sides to get apples from this orchard, which is a couple of miles from Newcastle. J. P. Lovekin, son of Richard, started a nursery, from which many a tree may be found on farms hereabout. His son, Fred Lovekin, maintains the family traditions, and is the proud owner of an 80-acre orchard of 5,000 young trees, besides a good orchard of older trees in bearing. The ranks of young trees stand as regularly as an army on a crest of rising ground. The ground is carefully cultivated.

Mr. Lovekin upholds the Lake Ontario apple belt against even the far-famed Okanagan Valley. "Why," he said, "twenty men like Will Gibson would grow as much as the entire crop of British Columbia." The W. H. Gibson referred to is president of the local Apple-growers' Association, and is looked up to in the neighborhood as the court of last appeal in the matter of apple culture. "There are few spots adapted to the growth of an orchard," remarked Mr. Lovekin. "The best soil for a long-lived tree is one with natural drainage and with no cold bottom."

"Thousands of trees used to be brought in here from Rochester," said Mr. Lovekin, "but now the trees come, for the most part, from Wentworth County nurseries, a two-year-old tree from there being like a three-year-old from Rochester. Like other growers of the district, Mr. Lovekin has not yet gone in for artificial manures, putting most of his barnyard manure on the orchard. He believes in applying lime in the orchard, as making the fruit color better. Mr. Lovekin plants his trees in rows thirty feet apart, with the trees twenty feet apart in the rows. He plants quick-bearing trees, like Wealthy or Duchess, as fillers alternately with Spies, with the intention of having the permanent trees in the orchard 40 feet by 33 feet apart. Mr. Lovekin advocates co-operation on the part of the apple-growers in disposing of their product, instancing what may be done by the fact that apples shipped from Newcastle have the name of being the best on the Glasgow and Liverpool markets. The product of most of these orchards finds its way to the Old Country, whither the first shipment was made by Dan Simmons forty years ago. The trade opened up by Simmons at Colborne and Brighton now requires storage warehouses with a capacity of 200,000 barrels. The shipments are made in barrels for the commission trade, and in boxes for the fancy London trade.

As to this year's crop, Mr. Lovekin thinks it will be as light as last year's. A. A. Colwill, Reeve of Newcastle, thought that there would only be a three-quarter crop, but W. H. Gibson thinks this pessimistic, and is of the opinion that an average crop would be nearer the mark.

What can be done by modern methods has been well illustrated by Thomas Montague, treasurer of the Apple-growers' Association. He took a neglected orchard, and raised its produce from 3 barrels to 125. The first year he got more apples from it than had been grown there in its whole previous history. The orchard stands on less than an acre of land, and is a stone's throw from Newcastle Station.

Albert Colwill is an enthusiastic advocate of the Ben Davis as a profitable apple for the grower. It comes into bearing in five years, and is as productive at that age as a Spy at fifteen years. The apple is showy, and one which sells readily, especially to the big hotel trade. It looks like a Snow, and has excellent keeping qualities, though it is inclined to be woody. Mr. Colwill has found that, by grafting a Spy on a Tolman Sweet, or a Pewaukee, he can gain five years in bringing the Spy into bearing. Mr. Colwill sees a future for the early apples of this district in the Western market.

How long does it take an orchard to come into bearing? Mr. Colwill has had 25 barrels on 200 trees, 120 trees of five years, and 80 trees of four years. While the trees are maturing, a hoe crop may be grown under them, or profit may be made from berries. On July 12th, one Newcastle man sold a consignment of berries from such a patch, at 12½ cents a quart, in Peterborough. A strip between the rows may be sown to grain even after the trees are in bearing.

Mr. Colwill says that farm land in this district, with an orchard of fifteen to twenty-year-old trees is worth from \$500 to \$1,000 an acre. "The only thing which would lead me to put a price on my farm," said Mr. Colwill, "would be the inability to get labor. At present we are dependent on day labor, for which we pay \$1.50 for a day of from 7 a. m. to 6 p. m., with holidays. The men can leave at a moment's notice. W. H. Gibson thinks that the day of small

holdings—20 acres or so, all in orchard—is coming. "In ten or twenty-five years," he said, "you will see whole families getting their living on such farms, spraying, packing, repacking, manuring and pruning."

The gross returns from such an orchard, Mr. Colwill estimates as follows: 40 trees to the acre, 5 barrels to the tree, \$2 a barrel sold on the tree; return from one acre, \$400. This is subject, of course, to deduction for loss by wind and weather, as well as for cost of cultivation.

W. H. B. Chaplin has been mentioned as having made a success at storing. He has eleven acres in bearing, and says it is enough for one man. He hires two men for nine days when it is necessary to spray, and from six to ten men for picking, from the beginning of September to about the 20th of October. For picking, Mr. Chaplin uses a couple of hundred bushel boxes, made of slats, with interstices to permit the free circulation of air. The early apples are picked into these, and are allowed to stand in them in the barn to cool. Should rain or frost interfere with picking operations, the men can be employed packing the apples in the barn into barrels. They are headed up with No. 3's on top, which, being small, offer a flat surface, and, on repacking, the larger apples are found to be not bruised. The barrels are stored on their sides in the cellar, tier above tier to the ceiling. The barrels are raised slightly from the gravel floor on poles laid at right angles to the barrels. Mr. Chaplin's cellar has a capacity for 600 barrels. He leaves the windows open till the snow flies, so that it may be perfectly cool. The apples are raised from the cellar, and repacked as the market requires. As has been said, this year Mr. Chaplin repacked his last Spies on June 18th. Sometimes not more than four or five apples in a barrel are found to be decayed when opened for repacking. Mr. Chaplin keeps a few swarms of bees, not for their honey, but for sterilizing the blossoms to secure a good set of fruit. He plows up and seeds down his orchard in alternate years.

A visit to Mr. Gibson's farm, where he has 80 acres in bearing, was of great interest. The orchard, of course, is on a wholesale scale. The spraying, for instance, is done with a gasoline motor, which scatters 150 gallons in 40 minutes. Mr. Gibson makes it a practice to seed a twelve-foot strip under his trees in grass, and to cut the grass to form a sod mulch. He finds that, besides being cheaper than cultivating under the trees, this method results in better-colored fruit. He cultivates, of course, between the rows, which are 35 feet apart. The trees are 26 feet apart in the rows.

Mr. Gibson pointed proudly to a row of eight-year-old trees of the Stark variety. A tape measure on the trunk showed 15½ inches. They were in bearing, and this year average about two bushels. As president of the fruit-growers' association, Mr. Gibson maintained the claims of the Lake Ontario belt to be known as the fruit district above all others of the Dominion. It had over twice the acreage, he declared, of the Niagara district.

REGINALD McEVROY.

THE FARM BULLETIN

Inconsiderate Employers.

Editor "The Farmer's Advocate":

As a constant and appreciative reader of "The Farmer's Advocate," I must agree in the main with what our friend "Rube," in your issue of August 17th, has to say on the above topic, especially his experiences with the boss or bosses over the hours of work, the dividing up of the work, time spent in gossiping (which is very considerable), and other shortcomings of employers on farms in Ontario, at the expense of the hired man.

My opinion is that farmers do not practice their cry of "All on an equality" very much; otherwise, some of them would act a bit differently toward men in their employ.

Because men are called Dick, Sam and Bill, that does not warrant the use of the phrase, "All on an equality." Another thing is treating men more as they would their own. The bosses would, I feel sure, be amply compensated by the more ready co-operation given by satisfied men, some of whom are as intelligent, practical and experienced as their employers.

DUM SPIRO, SPERO.

Air-Slacked Lime for Smut.

Air-slacked lime mixed with seed after first cleaning (1 gallon to 25 bushels), when it may be immediately put through the mill again, will completely destroy all spores of ball smut. This has never failed it fail. It is cheap, easily applied, and does not reduce the vitality of the seed. It is generally practiced in this section when any smut is found in seed.—W. S. Fraser, York Co., Ont.

Fox-farming on P. E. Island.

A FAST-EXTENDING AND PROFITABLE INDUSTRY.

Editor "The Farmer's Advocate":

The greatest boom that ever struck Prince Edward Island is at its height just now. Eighteen or twenty years ago, a man named Oulton started fox-breeding in the western end of the Province. He was alone in the business for a number of years, and little attention was paid to his experiment. He raised black foxes and marketed the skins in London, some of them at a very high price, but he kept his methods and successes pretty much to himself, and did not offer any of his foxes alive, rather preferring to keep the business all to himself.

But after a time it dawned on his neighbors that the business was very lucrative, and they began to prepare to have a share in it. The difficulty was to get stock to start with, as the only man in the business did not want to sell. He being a noted trapper, had begun with wild foxes, and, by crossing the red and black, had been successful, in a few years in having them all breed black ones.

After a time, however, he was prevailed on to sell a pair to a neighbor, and another ranch was started. The business then began to attract attention, as it was noted that in an incredibly short time men engaged in it became rich. Then a mild boom in fox-ranching began. Men of limited means procured red foxes, which were cheap, and easily obtained, and crossed them with a black male, succeeding in getting many of the progeny of the first cross black. By following on selecting and breeding to black males, they soon established the color in all the progeny. This being found possible, a greater boom naturally followed, and increasing numbers of farmers rushed into the business. Those few who had established ranches earlier now began to sell their stock to beginners, instead of slaughtering for the skins. Prices then bounded upward as the demand for breeding stock increased, and those who had well-stocked ranches made big money in a short time. Thus the boom increased, until to-day good black foxes are selling in pairs at from four to six thousand dollars. Still there is no sign of a halt; men are coming from the United States and paying the highest prices for breeding stock. In the breeding of foxes they are mated in pairs. The average litter is about four, and the range is three to nine. One breeder told me that his best was a litter of eight.

The ranches where these foxes are raised are generally located in a quiet grove, preferably containing a lot of underbrush, making as nearly natural conditions as possible. The ranch, the size of which is regulated by the number of foxes, is enclosed with strong wire netting on a frame which rests on a concrete wall which goes to the solid, so that the foxes cannot burrow out under it. Then, inside, each female fox has a house or den, as it is called, large enough to accommodate her and her family. The entrance to the den is by a spout, which is just large enough at the outer end to allow a fox to pass through. There are also doors in the dens through which men can enter, but these are generally kept locked.

The male foxes have each one its own den and a small yard for exercise.

Notwithstanding the high prices for breeding stock, the business is still spreading rapidly. New ranches are being started almost every day, and those with smaller capital are buying single foxes or pairs, and putting them in ranches on shares. Good money has been made this way by beginners who get the necessary capital to start ranches without risking too much.

And now the question is with many people, "How long will this boom last?" The continuance of the boom will depend altogether on the spread of the business, which will keep up the demand for breeding stock. At present, a live fox here is worth five times as much as the average skin would bring in the London market; so, if the demand for live foxes should fall off, the price would necessarily drop to the price of the skins. Even then, those who have well-stocked ranches would have a very lucrative business, compared with ordinary farming. It looks as if the business would spread, as a demand has arisen from the United States, as well as from other parts of Canada from those who are going into fox-breeding.

It is estimated that there are about four hundred and fifty black foxes on the Island now in about forty ranches. At prices that obtain to-day, this would sum up to about \$900,000.

That the business will rest on a sound basis when the boom subsides, is allowed by all, as there is no fear of black fox fur becoming a drug in the market. Wild fur-bearing animals are ever becoming scarcer as their haunts are being invaded by men, and the prohibition put on catching the fur seal for fifteen years may make an even larger place for black fox pelts. And perhaps the greatest factor of all is that the world is

growing richer, and more people than ever are able to follow the demands of fashion in the matter of costly raiment.

WALTER SIMPSON.

Fall Wheat.

Editor "The Farmer's Advocate":

This week will be a busy time seeding, and a few suggestions, inspired by "Preparing the Seed-bed for Wheat," in a recent issue, may be appropriate. The summer-fallow has been looked upon as being a necessity for fall wheat. I claim that a rich pea stubble is about equally good, if proper attention is paid to the preparation, but too often it is left till the last, even till after the summer-fallow has been attended to, and, therefore, the surface soil is dry and lumpy, and in no condition to start a quick and healthy growth.

Taking it for granted that the summer-fallow or pea stubble has had nearly all the work intended bestowed upon it, go over it with the disk, running disks nearly straight, which will cut to the bottom, and tends to compact it more than any other implement I know of, more especially with the pea stubble or sod; then go over with the common toothed harrow. The seed-bed being prepared, treat the wheat with formaldehyde, either in a close box, that the gas may penetrate and kill all smut spores, or put wheat into a sack and dip into a solution of one pint formaldehyde in fifty gallons of rain-water. Clean the wheat thoroughly of all smut piles or bunt, which may be done by any good fanning mill. Slip the chess board down until about six inches from end of shoe, fill hopper, and open sufficiently to let an even flow over the chess board. Do not have the stream so heavy as to obstruct the passage of the piles or grains of smut. Take all of the sieves out, as they are only a hindrance, and put on enough pressure to blow every particle of smut over the shoe. Give plenty of wind, as it is better to blow a fair percentage of grain over than have a few grains of smut balls left in the seed, the spores of which cannot be destroyed by this process. Fill into a hemp or gunny sack, dip in solution, and leave for two minutes, then lift out and let it drain so that the flow will go back into the tub. As soon as possible, spread it on the barn floor, so it will dry up quickly. The seed must be thoroughly dry when put into the drill. If at all swollen or damp, allowance must be made, and drill gauge set accordingly.

After sowing, go over ground with heavy roller, crosswise of the drilling. This packs the earth round the seed, which will sprout fairly well in moderately dry ground, where otherwise only a few spindly stalks would come up. Now harrow once over the same way as drilled. This loosens the surface, which will check much of the evaporation.

Bruce Co., Ont.

W. WELSH.

The Hired Man's Side.

Editor "The Farmer's Advocate":

I have frequently noticed in your columns letters from farmers seeking a solution of the scarcity-of-labor problem, and have often wondered why some hired man has not written on the subject. In consequence, a little spirit moves me to write a few lines, on the off chance of your publishing them. In the first place, surely the remedy lies with the farmers themselves, as they seem to lose sight of the fact that a hired man is only a human being, of the same clay as themselves, and not a machine on the perpetual-motion system. I have only been in this country a few years, during which time I have been a farm laborer, and am heartily sick, not of farming, but of the arrogant and supercilious manner in which the average farmer and his family treat the hired man. They have the idea that, no matter where a laborer sleeps, or what he gets to eat, it is always one better than what he has been used to. Some farmers would be more at home with a white coat on, bossing a gang of slaves with a long whip, as they seem to think that, in hiring a man for a length of time, they have bought him body and soul, instead of just hiring his physical strength, and that their sole duty is to keep his face on the grinding-stone fourteen hours a day, six days a week. Small wonder that so many men go to the towns and turn their backs to the farm forever. Well, I will cut a long story short and finish up with a few words: Treat your man with consideration; give him the smooth with the rough; see that his food is wholesome and substantial, and see that this bed and bedroom are such that you would not be ashamed if, by any chance, your visitors should happen to peep at them. Surely these suggestions are not unreasonable. Follow them out, and then perhaps you will not experience any difficulty in keeping a man in the future.

ANON.

The Iowa Experiment Station has rented a twenty-three-acre orchard for demonstration purposes.

An Employer's View Point.

Editor "The Farmer's Advocate":

A great deal has been and is being said regarding the help question in this fair Canada of ours, and it certainly is a fact that, to get all the help one needs, is sometimes out of the question; but what arouses the blood of an employer is just such language as "Rube" has used in his letter of August 17th.

I have always supposed the County of Oxford to be one of the star counties of Ontario, but it certainly is far short of it if "Rube" tells the truth, which I very much doubt. I don't believe there is a farmer in Oxford that does not have order about his work, or that would ill-treat his help in any way, if he has the right kind; and the right kind is not the one who can work for twenty-five men in twelve years, and not find a good point in any of them. It is evident that such men are of little use on a farm, and especially in the County of Oxford, where the men are hustlers, as they have to be with such large farms as the most of them have. The writer is a farmer in Norfolk County, has been for forty years, and never saw one of the things "Rube" writes about. The farmers here are reasonable, of good understanding, and know how to treat their help, and can generally keep them as long as they want them, and can hire them again the next year. They get up at five o'clock in the morning, turn out at twelve o'clock, go to work at two, quitting at six; and no man, unless it be occasionally in harvest time, with a storm coming on, expects to work beyond his hours, and no hired man—if he is a man—will object to that.

"Rube" is finding fault with the "boss," as he calls him, for standing an hour and talking to anyone who may chance to pass his way. It is not the hired man's business what the boss does, but it is the boss's business what the man does, and how he puts in the time that he gets big pay for. There are a great many men, and boys, also, who have a fair education, but little energy, and, as the Old Country has no use for them, they come out here, expecting to find a people who will give them big wages, food and washing, with little or nothing to do, and a horse and buggy to go to town whenever they want it. And "Rube" is just that kind, from the sound of his voice, and he is very much disappointed with Canada and the farmers in Oxford County.

Now, I would suggest that he go to work like a man, and try and earn what is paid him, and not be running down the country or the man who gives him his living, and he will be more contented with himself and those who are so unfortunate as to employ him.

He says it is only the poor men who haven't enough brains to kick, but I notice it's the lazy man who always kicks, and he hasn't good sense enough to see his fault.

Now, Mr. Editor, I hope there will be someone else willing to stand up for Oxford and the farmer in general. And I know, when a man calls riding the plow or mower a snap that he does not know what he is talking about, for there is something else to do besides sitting on the sulky plow, if he does the work properly.

JOE OF NORFOLK.

Auto Restrictions.

Editor "The Farmer's Advocate":

Owing to the automobile usurping the whole of our roads, and practically driving our wives and daughters from their regular trips to town with butter and eggs, etc., or for their regular supply of groceries, some restrictions should be placed upon the autoists, so that the favorite nag may be saved from a frenzied fit of fear, and the driver from a smash-up.

I would suggest that all autoists be required to stop where meeting any vehicle on a dangerous part of the road, and, if need be, to back up to some part where there will be less danger in passing; also, to have the number of the license placed in a very prominent position, on screen or dashboard, away above mud or dust, and where it can be seen before or behind, no matter what speed the machine may be driving.

W.

Changes in Fair Dates.

Editor "The Farmer's Advocate":

In your issue of August 24th you refer to the changes that are constantly being made in the list of dates of Ontario fairs and exhibitions issued by the Department of Agriculture. The Department, as you are doubtless aware, have absolutely nothing to do with the fixing of these dates, and the list is only issued at the request of editors of leading papers in the Province. Every society is notified previous to its annual meeting in January to send to the Department promptly the dates selected. Our list is usually published in the early part of May, and a number of fair dates are not received till June and July. In many instances, after the dates are sent us, they are frequently altered by Boards of Directors, and the Department is not notified. On being informed of change

of dates, we write to the papers promptly, sending them the corrected ones. This year an unusually large number of societies changed their exhibition dates on account of the Dominion elections, on September 21st.

Toronto.

J. LOCKIE WILSON,
Supt. Agr. Societies.

Heavier Tax on Automobiles.

Editor "The Farmer's Advocate":

In reading the article of August 24th, on taxing the horse, am surprised that any man with common sense would write such an article. He speaks about more bad roads in York County than any other county in Ontario. Certainly, he must use the roads very extensively, or how would he know so much about them? Mr. Fish asks, "Who have we to thank for these roads?" Certainly, it is not Mr. Fish. He objects to the way the roadwork is done. Remember the good book: "Judge not, lest ye be judged." We have a considerable amount of gravel road in York County, and only wish that all motorists thought as little of our roads as Mr. Fish, then our wives would not be in dread of driving on our highways as much as they are. I don't think we farmers are getting a square deal at all, as what roads we have were made by us and our forefathers, and now the motorists come along and want possession, or nearly so. Who has the most right to these roads? Are we to be imposed on like this, or are we to stand up for our rights on our highways. I must say that some of the motorists are perfect gentlemen, willing to stop if your horse be afraid, while, on the other hand, the man with the swelled head dashes along the road, caring for nothing, and, if your horse puts you in the ditch, only laughs, and never stops to see whether an accident has occurred.

The idea of taxing us farmers for every horse we keep is nothing but a piece of imposition, and a law Mr. Fish will never get passed. I must admit that the autos are increasing on our roads, and the horses decreasing to some extent—not that there are any fewer, but that many would sooner stay home than be run down by dare-devil drivers, as I may call them.

Which presents the better appearance at our fairs, a row of good horses, or a row of automobiles? I, for one, think that our laws are not strict enough on the autos. What is a fine of \$5 or \$10 for running overspeed? I would say, cancel their license for one year, if found overrunning their allotted speed, then we will have less trouble on our roads, and will also have better roads.

"YOUNG FARMER."

Fair Terms.

Editor "The Farmer's Advocate":

Your recent editorial re autos and the dust nuisance presents one of the live issues of the times, especially to farmers, and, as the views of readers are invited, it is "up to us" to take a part in the discussion and to state our approval or disapproval of the conclusions arrived at. For my own part, your statement of the case and need of remedy seem wholly rational and right. Whether or not the expense of the improvements required may be too great to be made up by license fees, as levied in some of the States, it is certainly the only way consistent with justice in which to deal with the matter, as it is clear that when we have roads sufficient for our use, or practically so, the owners and users of motor vehicles should pay the greatest part, if not all, of the expense of such improvements as their traffic requires. There would perhaps be a slight benefit to others in having oiled roads, but this is more than offset by the dangers to which motor traffic exposes the travelling public—the risk of injury to life and limb, which you mention incidentally, but which should not be lost sight of, debarring, as it does almost entirely, the use of the roads by the less capable classes of drivers, who may have just as much need, and certainly as much right, to use them as any. It seems to me that a bad mistake was made when the Grange proposal prohibiting such traffic during a part of each week was allowed to fall through for want of better support by the farmers of the Province. The present arrangement is certainly of the jughandled variety. That the motorist should have the right to use the best part of the road whenever convenient, while the farmer must take all the risk and delay of going off to the side, into or across the ditch, if any, or through a gateway, if one is near, seems somewhat absurd, to say the least, considering the part that has been taken by the farmers in making and maintaining rural highways.

If conditions were reversed, and rural residents essaying to use urban thoroughfares with equal freedom, causing similar danger and inconvenience to citizens, it is a safe guess that they would be promptly penalized by the authorities. But farmers, by their inertia, have given away their rights; the glamour of wealth and desire to pay homage thereto has mesmerized some; others have considered the matter from a personal standpoint

only, wasting no time in consideration for the safety of others, if they could get along themselves without trouble. The politically biased, of course, are willing to have the matter settled in Toronto, however unfairly, and so we have illustrated once more that "division is weakness," and have played into the hands of "the upper ten." It is, therefore, the more necessary that we should stand united for the proposal to equalize more fairly in the effort to abate the dust nuisance and maintain the roads at the high standard required for motor traffic; and the motorists themselves, to their credit, be it said, have invited this course by their offer to contribute for those purposes at the rate of 50 cents per horse-power of their machines per annum—inadequate though that may seem, if the costs run near the estimate stated in your article.

Now that the rush of harvest is over, there is opportunity for full discussion of the whole situation from all standpoints. I see that your motorist correspondent, Mr. McCarty, thinks that farmers fear that the use of autos will bring down the price of horses, but I have heard nothing of that kind mentioned as an objection. We realize that automobiles have come to stay, and have not

the slightest objection to their doing so, on fair terms.

Perth Co., Ont.

Ontario Crop Statistics.

The following statistics of the principal field crops of Ontario for 1911 show the acreage, as compiled from individual returns made by farmers to the Ontario Bureau of Industries, and the yields estimated by a large and experienced staff of correspondents, who give probable yields, according to conditions on August 5th, 1911:

Fall Wheat—837,492 acres will produce 17,034,052 bushels, or 20.3 per acre, as against 743,473 acres, 19,837,172 bushels, and 26.7 in 1910. The annual average for 29 years was 17,878,244 bushels, and 21.0.

Spring Wheat—133,711 acres, 2,375,843 bushels, or 17.8 per acre, as against 129,319 acres, 2,489,833 bushels, and 19.3 in 1910. Average, 15.9.

Barley—616,977 acres, 16,766,319 bushels, or 27.2 per acre, as against 626,144 acres, 19,103,107 bushels, and 30.5 in 1910. Average, 27.8.

Oats—2,699,230 acres, 88,261,352 bushels, or 32.7 per acre, as against 2,757,933 acres, 102,-

084,924 bushels, and 37.0 in 1910. Average, 35.7. Rye—98,652 acres, 1,624,572 bushels, or 16.5 per acre, as against 95,397 acres, 1,620,333 bushels, and 17.0 in 1910. Average, 16.4.

Peas—304,491 acres, 4,773,513 bushels, or 15.7 per acre, as against 403,414 acres, 6,016,003 bushels, and 14.9, in 1910. Average, 19.3.

Beans—51,508 acres, 925,228 bushels, or 18.0 per acre, as against 49,778 acres, 892,927 bushels, and 17.9 in 1910. Average, 17.2.

Hay and Clover—3,301,468 acres, 4,238,362 tons, or 1.28 per acre, as against 3,204,021 acres, 5,492,653 tons, and 1.71, in 1910. Average, 1.46.

The acreages in other crops, for which no estimates as to yield have been made at this date are as follows: Buckwheat, 189,039, against 194,913 in 1910; corn for husking, 308,350, and 320,519; corn for silo, 335,935 and 326,627; potatoes, 162,457 and 168,454; mangel-wurzels, 64,855 and 68,966; sugar beets, 24,664 and 26,879; carrots, 3,207 and 3,551; turnips, 100,593 and 108,360; mixed grains, 486,112 and 497,936.

There are 3,116,768 acres of cleared lands devoted to pasture, 279,220 in summer-fallow, 303,188 in orchard, 25,360 in small fruits, 11,586 in vineyard, 58,748 in farm gardens, 40,330 in rape, 12,128 in flax, 14,744 in tobacco.

THE CANADIAN NATIONAL EXHIBITION.

The teaching profession will remember, as a graceful parting message, the plea for increased salaries to those engaged in the work of school education, made by Earl Grey, the retiring Governor-General of Canada, in opening the Canadian National Exhibition, at Toronto, on Monday, August 28th. In view of the necessarily increasing preparation involved, and the great responsibility of their duties to the people and the country, he felt impelled to express his conviction that teachers were not sufficiently paid yet, although improvement is being made in that direction. In his official greeting, President Geo. H. Gooderham referred to the fact that the Governor had formally opened the show four years ago, and that it had successfully reached the 33rd year of its existence. As a permanent memento of his presidency, Mr. Gooderham presented the Association with a magnificent fountain opposite the administration building, where the spraying waters freshened the air.

The dust was more than well laid by the heavy rains of the inaugural occasion, but the weather on succeeding days was ideal, bringing a record-breaking attendance through the turnstiles. The exhibition constitutes a great annual holiday for Toronto, and in its spectacular feature and amusements no doubt reflects the city spirit and craving for entertainment and military display, to provide which taxes the administrative genius of the management. Midway concessions appear to multiply in numbers, if not in merit, and endless ring games are in evidence to relieve the gullible of their surplus cash. The public has been largely educated to hanker for this sort of thing, and, with the natural hunger for meals, confections and throat-coolers, a heterogeneous mass of business has been evolved, for all the world, like Bunyan's Vanity Fair, run for whatever cash there is in it. A city paper went to some pains to figure out what was spent at the Fair, and reached the conclusion that \$1,000,000 would be a conservative estimate, as it was expected that the total attendance would reach the million mark this year, and last year the Association itself took in nearly \$300,000, which would represent about one-third of the spendings. Meals this year would amount to about \$250,000; probably \$100,000 would be spent along the Midway; purchases of pianos, automobiles and other merchandise would reach indefinitely large sums, to which is to be added some \$50,000 paid out by the Association in prizes. A large piano manufacturer told "The Farmer's Advocate" that probably one-half the output of their establishment went to the homes of farmers, who were now taking a better class of instruments. One does not have to study very long the National Exhibition to see that upon the progress and purchasing power of the people of the farm the general prosperity of the country fundamentally depends.

Livestock and manufactures constitute the backbone of the fair, and the owners of the latter are asking for more room to display their prod-

ucts and processes. Leaving out of account the premiums paid, exhibitors of live stock have just grounds for complaint. The housing this year was hopelessly inadequate. Entries were accepted for which the management must have known there was no room. Scores of valuable animals were covered with improvised tents located in out-of-the-way corners; several found themselves in the sheep pens, and another bunch was tied to a fence. A fine exhibit of Shorthorn cattle by Harry Smith, of Hay, Ont., was not taken on the grounds at all, but were temporarily fed and watered in the city, and returned home at great expense and trouble. Small wonder that breeders should be disheartened at such treatment and mismanagement as this. The repeated requests of long-suffering stockmen for a decent judging-ring and pavillion continue to be shelved, and hundreds of men and women could be seen, hour after hour, struggling for standing room under the hot sun around the picket fence, in a vain effort to see the placing of the awards in the cattle classes. The horse-judging is done within the grandstand area, and, except in the speeding classes, practically nothing could be seen, even after paying the extra admission fees, which would have to be repeated again and again, on account of the way in which the judging of different classes drags along.

Large expenditures are made for facilities to accommodate less-important interests, but a policy of let ill-enough alone is pursued in relation to these classes, well calculated to drive breeders away from the fair.

About the grounds there was talk of assurances from a member of the Provincial Government, to the effect that an Ontario Building might be expected to materialize, in which field agriculture and provincial agricultural agencies would be fittingly represented. This year's Ontario display in the Horticultural Building was a decided improvement on that of 1910, and in accord with the suggestions offered in "The Farmer's Advocate" in reviewing the last exhibition. The Departmental Representative for Lambton, S. E. Todd, of Petrolia, had forward a grand exhibit of the fruits, grains and vegetables of that county, which was a pleasing revelation to thousands of visitors. Those in charge, also, distributed a handsome illustrated folder, brimful of facts about the sunny south-western section of Ontario. A great deal of space in this building that might well be more effectively used, is needlessly taken up year after year with cumbersome exhibits of palms and other foliage plants.

Looking over some of the grain displays in the Railway Building, and those of Western Provinces in the Horticultural Building, there would seem to be considerable duplication of exhibits, utilizing space that could probably be devoted to more instructive purposes. Now, whatever may be done to provide additional facilities to display the agricultural resources and products of Ontario (Old and New), adequate provision for live stock, which is yet the foundation security of Ontario husbandry, must be made. The promises and assurances of the Exhibition Association to the stockmen and interested public are long overdue.

As in former years, the Machinery, Dairy and Process Departments attracted deeply-interested crowds, and the Educational Building, with its instructive displays in the interest of sanitation, the health of the people, and the exhibits from the Agricultural College and other public institutions, was thronged from morning till night. There is unlimited scope for the development of the exhibition

in these directions, and it is hoped that some aggressive spirits in the Association will devote their gifted energies in that direction for the show of 1912.

To have made the exhibition annually the greatest of its class in the world is a notable achievement in Canadian annals. This is the way of Canada, to blaze out a track for others. But to keep up the pace makes each year's task greater than the one before, and it imposes serious responsibilities, for it is an educator and an incentive to the thousands who annually gather at Toronto from all parts of the continent, and becomes a pattern for other exhibitions, large and small; hence the reason for keeping agriculture and industrialism to the fore, and placing a firm hand upon merely sporting and amusement features, so that it may contribute continuously and substantially to the solid education of the people.

Horses.

A notable feature of the 1911 horse department was the large number of Percherons, which made a very creditable exhibition. Graham Bros., the noted Clydesdale breeders, of Claremont, Ont., after showing at Toronto every year since 1888, did not enter this year. Clydesdales, while of good quality, were not forward in quite such large numbers as usual. Shires, while not numerous, presented several good animals at the call of the judges.

The largest exhibitors of Clydesdales were Graham-Renfrew Co., Bedford Park; Smith & Richardson, Columbus; Hodgkinson & Tisdale, Beaverton; J. B. Hogate, Weston; J. D. Larkin, Niagara-on-the-Lake; T. D. Elliot, Bolton. Among other exhibitors who had a few choice animals were Jno. Davidson, Ashburn; K. R. Marshall, Dunbarton; W. J. Howard & Son, Fairbank; William Clayton, Grand Valley; Patterson Bros., E. Toronto; A. G. Gormley, Unionville; Alex. Doherty, Wexford, and J. M. Gardhouse, Weston.

Shire honors were contested by J. B. Hogate, Weston; Porter Bros., Appleby; J. M. Gardhouse, Weston; Wm. Pearson & Son, Hamilton; John E. Webb Co., Toronto, and John Breckon, Appleby.

At time of going to press only a few of the Clydesdales and Shires had been passed upon, and no Percherons had been before the judges. A full review of the horse classes will appear in next week's issue.

The aged Clydesdale stallion class brought out nine horses—a good lot, though not comprising many sensational individuals. First went to the Graham-Renfrew Co. on Baron Kelvin, second to Smith & Richardson on Hyacinthus; third to T. D. Elliot on Tom MacNab, and fourth to J. B. Hogate on Manaton. Three-year-old Clydesdale stallions were not out in strong numbers, but some flash ones faced the judges. Graham-Renfrew Co. had four entries, and succeeded in winning the first three prizes, on Flisk Prince, Bydand and Royal Muirton. Flisk Prince is a deep, thick horse, with abundance of quality and true action.

Three-year-old Clydesdale fillies were a strong class, comprising nine individuals. Alex. Doherty secured premier honors on May Queen, a very handsome black, brimful of quality, and with size and substance galore. Graham-Renfrew Co.'s Purple Heather stood second, and she, too, is of very high quality. Smith & Richardson got third on Bess of Langbarn; J. D. Larkin fourth on Lady Clio, and Kerr & Davidson fifth on Lady Evan.

Three aged Hackney stallions were out. First went to G. H. Pickering, Brampton, on Derwent

Performer; second to A. Yeager, Simcoe, on Brookfield Laddie, and third to J. B. Hogate on Chaigeley Admiration.

Cattle.

BEEF BREEDS.

SHORTHORNS.—Owing to unfavorable weather on Saturday the judging of Shorthorns was delayed, and was not completed in time for a full report in this issue. The breed is very largely represented, the entries totalling over 200, contributed by over twenty-five exhibitors, two prominent United States herds being in the contest, and the quality of the animals competing was quite equal to that of any former year, the bulls especially being of a high-class order. Awards were placed by John L. Reid, a noted Scottish breeder of Shorthorns, whose work, carefully performed, appeared to give general satisfaction. In this preliminary report only the high places are touched. The full prize list will appear next week.

In the aged bull class, which was an unusually strong one, individually, the contest for supremacy was finally reduced to a comparison of the two notable animals, Meadow King and Shensstone Albino, the former the grand champion at Toronto last year, which came out again in splendid condition in the herd of W. H. Miner, of Heart's Delight Farm, Chazy, N.Y., having lost nothing of his smoothness or quality, but rather showing improvement. Both are exceptionally superior animals, and to decide between them was not an easy task, but Meadow King was at length placed first, and later in the day declared again senior and grand champion at the Canadian National. Meadow King is in color a rich roan, three years old, bred by Miller Bros., Brougham, Ont., and sired by Mistleto Eclipse, while Shensstone Albino is a white six-year-old, bred in England by Sir R. P. Cooper, and sired by Speculator.

In the two-year-old section an excellent entry which captured the first award was the massive and much admired roan, Marcellus, shown by Capt. T. E. Robson, London, Ont.; second place being well filled by the red Mountaineer, bred by Miller Bros., exhibited by Peter White, of Pembroke, and sired by Uppermill Omega (imp.).

In the senior-yearling section was found a sensational entry in the roan, Gainford Marquis, a notable winner at leading English shows, bred by Geo. Harrison, Gainford, sired by Gainford Knight (imp.), and owned by J. A. Watt, Salem, Ont., who personally selected him, well maintaining his reputation as a critical judge. The excellent character and quality of the bull were admired, despite the worry of his recent transportation and sixty days' quarantine experience, which, of course, would not improve his condition. He was without protest given the junior championship, and was reserve for grand championship.

Carpenter & Ross captured the first prize in junior yearlings, with Glorious Dale 2nd, a red son of Avondale.

The senior-bull calf section, with 20 entries out, made a sensational showing, being by common consent acknowledged as the most uniformly excellent ever seen at a Toronto show; the first award going to Carpenter & Ross' roan, Pride of Albion, by Shensstone Albino, and second to Capt. Robson's roan, Prince Butterfly, both of fine type and quality.

Thos. Redmond, of Millbrook, Ont., who never fails to bring out a good one or two, won first in a good class of junior bull calves, with Marigold Royal, by Royal Prince. The grand prize for the best Shorthorn animal, male or female, was won by the champion bull, Meadow King, reserve being Carpenter & Ross' roan cow, Dale's Gift.

DAIRY BREEDS.

Never before were the special dairy breeds so strongly represented at a Canadian exhibition, in respect of numbers and individual excellence, as at Toronto last week. Uniformity of breed type and promise of productiveness at the pail were prominent features in all the classes, and never were the awards more carefully and competently placed, the single judges performing their difficult task, in unusually large classes, with admirable skill and consistency, their work serving as an education in the art of judging live stock and an evidence of confidence in their knowledge, from experience, of the most desirable type and qualities.

AYRSHIRES, which were judged by W. F. Stephen, of Huntingdon, Quebec, Secretary of the Canadian Ayrshire Association, were by far the most numerous represented of all the breeds, the entries of individual animals totalling over 250, made a magnificent showing in the hands of just twice as many exhibitors as last year.

Contestants this year were R. R. Ness and Hector Gordon, of Howick, Que.; Ryanogue Farms, Brewster, N. Y.; Wm. Stewart & Son, and Alex. Hume & Co., Menie, Ont.; P. D. McArthur, North Georgetown, Que.; A. S. Turner & Son, Ryckman's Corner's Ont.; Trotheway Model Farm, Weston, Ont.; H. C. Hamill & Co., Box Grove, Ont.; D. Hillaker, Burgessville, Ont.

In a class of eight excellent aged bulls, the problem of preference for first place narrowed down to McArthur's massive and typical Netherhall Milkman, in his five-year-old form, and the attractive three-year-old, Bargenock Victor Hugo, sold at the Hunter sale at Maxville last spring for \$2,600. It was a close contest, ending with placing in the order named. From the six two-year-old bulls competing, Ness' Hobsland Gipsy King, of fine type and quality, was selected for premier place, Gordon's Auchenbrain His Eminence and Turner & Sons' Lessnessock Forest King, after a close comparison, being placed second and third. Gordon had a popular winner in the yearling class in his Whitehall Free Trader, in a class of ten really good ones, Ryanogue Farms securing second place with their Commander. McArthur led a strong class of sixteen senior bull calves with Bloom of Maple Hill, Turner being first in juniors. In an uncommonly strong class of nearly twenty aged cows, of uniform type, and carrying large and shapely udders, first place was given to Ness' typical Auchenbrain Fanny, Ryanogue Farms coming in second with White Rose. The latter herd provided the winner in the three-year-old cow class in Faultless Spicy Nannie. In the dairy-cow class, in calf, the winner among fourteen entries was found in Ness' Finlayston Maggie 3rd. In a grand class of eighteen two-year-old heifers of ideal type, the first award went to Hume's typical home-bred White Legs of Menie, by Oyama's Heir, and second to Ness' imported Barcheskie Orange Blossom. Twenty-one yearling heifers filled a very even and excellent class, Ryanogue Farms winning first and second awards, and Stewart third. The prize list in full follows:

Bull, three years and over—1, McArthur, on Netherhall Milkman; 2 and 3, Ryanogue Farms, on Bargenock Victor Hugo and Lessnessock Marshall Oyama; 4, R. R. Ness, on Barcheskie Copstone; 5, Stewart, on Queen's Messenger of Springhill. Bull, 2 years old—1, Ness on Hobsland Gipsy King; 2, Gordon, on Auchenbrain His Eminence; 3, Turner & Son, on Lessnessock Forest King; 4, Ryanogue Farms. Bull, 1 year old—Gordon, on White Hill Free Trader; 2, Ryanogue Farms, on Commander; 3, Ness, on Morton Mains Planet; 4, Gordon, on Bruce. Bull calf, senior—1, McArthur, on Bloom of Maple Hill; 2, Stewart, on Tam; 3, Hume, on Sprightly's Spicy Sam; 4, Turner, on White Prince of Springbank. Bull calf, junior—1 and 2, Turner, on Guiding Star and Major of Springbank; 3, Gordon, on Winter King. Senior champion bull, Netherhall Milkman; reserve, Hobsland Gipsy King. Junior champion, Bloom of Maple Hill. Grand champion, Netherhall Milkman.

Cow, 4 years and over—1, Ness, on Auchenbrain Fanny 9th; 2, Ryanogue Farms, on Auchenbrain White Rose; 3, Gordon, on Bargenock Blue Bell; 4, Hume, on Clerkland Kate 2nd. Cow, 3 years—1, Ryanogue Farms, on Faultless Spicy Nannie; 2, Stewart & Son, on Dewdrop of Menie; 3, Hume, on Lessnessock Sprightly; 4, McArthur, on Cherrybank Clara. Cow, dry, in calf—1, Ness, on Finlayston Maggie; 2, Ryanogue Farms, on Oldhill Ladysmith; 3, Ness, on Kirkland Stonechat 2nd; 4, Hume, on Annie of Warkworth. Heifer, 2 years—1, Hume, on White Legs of Menie; 2 and 4, Ness, on Barcheskie Orange Blossom and Barcheskie Daisy 8th; 3, Ryanogue Farms, on Barboigh Big Nancy 4th. Heifer, 1 year old—1 and 2, Ryanogue Farms, on Hobsland Nancy 2nd and Rossmohr Maid Marion; 3, Stewart & Son, on White Heather 2nd; 4, McArthur, on Cherrybank Queen. Senior heifer calf—1 and 2, Ryanogue Farms, on Ryanogue Hattie and Kate; 3, Gordon, on Kirkland Nellie Bly; 4, Hume, on Spicy Lass. Heifer calf, junior—1, Ryanogue Farms, on Valentine; 2, McArthur, on Cherrybank Milkmaid 2nd; 3 and 4, Turner & Son, on Springbank Phyllis and Springbank Countess. Senior female champion, Finlayston Maggie 3rd; junior champion female, Hobsland Nancy 2nd; grand champion female, Hobsland Nancy 2nd. Graded herd—1, Ness; 2, Ryanogue Farms; 3, McArthur; 4, Hume. Young herd, bred by exhibitor—1, McArthur; 2, Gordon; 3, Ness; 4, Hume. Four animals, get of one bull—1, McArthur, Netherhall Milkman; 2, Ness, Barcheskie King's Own.

HOLSTEINS were represented by nearly 200 individual entries, the largest number shown here in many years, and of high average merit, the bulls being especially strong. The classes were well filled throughout, the animals shown in fine condition, and the awards capably placed by the noted breeder of Holsteins, W. H. Standish, of Lyons, Ohio, whose work was thoroughly done and gave general satisfaction. Exhibitors in this class were Arthur Pearce, Cornell, Ont.; Lakeview Farm, Bronte, Ont.; A. C. Hulet, Norwich, Ont.; S. Macklin, Weston, Ont.; G. S. Gooderham, Bedford Park, Ont.; Tig Wood, Mitchell, Ont.; Bales Bros., Lansing, Ont.; James Rettie, Norwich, Ont.; Trotheway Model Farm, Weston, Ont.; K. R. Marshall, Dumbarton, Ont.; Haley Bros., Springfield, Ont.; John Clarkson & Sons, Summerville, Ont.; N. Sangster, Ormstown, Que.

John McKenzie, Willowvale, Ont.; F. A. Legge, Jefferson, Ont.

In the section for bulls three years and over, nine entries were forward, an uncommonly good class, from which was selected for first place the grand quality bull Lagan Prince Schuiling, sired by Daisy's Schuiling Monarch, dam Perrina Abbekerk. This bull was bred by Wm. Suhring, and exhibited by Tig Wood, whose first appearance as an exhibitor at the Canadian National was a grand success, he winning the grand championship gold medal for the best Holstein bull, any age, and the liberal special prize of \$500, donated by the Ontario Provincial Government, for the best Holstein animal, male or female, 25 selected individuals, 13 bulls and 12 females, competing. In the aged bull class the other three prizes also went to practically new exhibitors at Canada's greatest exhibition, as the prize list following shows. In an excellent class of two-year-old bulls, the first award went to Pleasant Hill Korndyke Pontiac, young for his class, being only a few weeks over the yearling limit, but of ideal type and quality, owned by Neil Sangster, who also shows for the first time at Toronto, and whose splendid young bull was selected as reserve for the grand championship and of the breed \$500 prize—a case of "so near, and yet so far." In an unusually strong class of yearling bulls, a popular first was found in Haley Bros.' fine-quality entry, Prince Malta De Kol, bred by the exhibitors, young for his class, and one of the most promising propositions of the breed in the show, being of first-class type and quality. The second award in this class went to John McKenzie, a new exhibitor, for his excellent Sir Lyons Hengerveld Segis. Haley Bros. were again first, and also second, third and fourth, in a capital class of 13 senior bull calves, all by their stock bull, King Baron Mercena, an unusual record for a sire at this show. The first and second awards in the junior bull calf section also went to Haley Bros. Holstein cows and heifers in milk made a grand display, the majority being of refined type and conformation, while carrying well-balanced and shapely udders, indicating capacity for great milk production, while the younger sections were filled with entries numbering well over the 'teens in some cases, of singularly uniform type and quality, and giving great promise of future usefulness in the dairy. A striking feature of the Holstein exhibit this year was the signal success in prize-winning of new exhibitors making their first appearance in the show-ring of the National as competitors for honors, notably the firm of Haley Bros., Neil Sangster, and the man from Perth County, with abbreviated nomenclature, who came and conquered in the competition for the \$500 special prize for the best Holstein of any age or sex. Such success should furnish encouragement for other young breeders to enter the field. The awards follow:

Bull, 3 years and over—1, Tig Wood, on Lagan Prince Schuiling; 2, Bales Bros., on Sherwood Faforit Posch; 3, Macklin, on Salvador Cornelius Posch; 4, Arthur Pearce, on Dewdrop Johanna Tagne De Kol. Bull, 2 years—1, Sangster, on Pleasant Hill Korndyke Pontiac; 2, Rettie, on Ina Tritom 2nd Abbekerk; 3, Haley Bros., on Grace Payne 2nd's Sir Colantha; 4, Clarkson, on King Norine Wopke Pasma. Bull, yearling—1 and 3, Haley Bros., on Prince Malta De Kol and Samson De Kol King; 2, McKenzie, on Sir Lyons Hengerveld Segis. Bull calf, senior—1, 2, 3 and 4, Haley Bros., on Baron Mercena, Prince Mechthilde Butter Baron, Baron Posch Mercena, and Baron Artalissa Mercena; 5, Bales Bros., on Faforit Posch. Bull calf, junior—1 and 2, Haley Bros., on Prince Calamity Mercena and Sir Colantha Payne; 3, F. A. Legge, on Coral's Brightest Canary, Jr.; 4, A. E. Hulet, on Sir Ormsby Fancy. Bull, senior champion, Lagan Prince Schuiling; reserve, Pleasant Hill Korndyke. Grand champion, Lagan Prince Schuiling; reserve, Pleasant Hill Korndyke.

Cow, 4 years and over, in milk—1 and 4, Haley Bros., on Iantha Jewel Mechthilde 3rd, and Jimima Wayne Johanna; 2, Sangster, on Olean Patroness; 3, Rettie, on Helbon Bonheur Posch. Cow, 4 years and over, dry—1, Rettie, on De Kol Pauline Sadie Vale; 2, Sangster, on Verona; 3, Haley Bros., on Queen of Oxford; 4, Hulet, on Madolyn Duchess De Kol. Cow, 3 years old—1, Macklin, on Muriel Posch De Kol; 2, Hulet, on Ladoga Idaline Veeman; 3, Haley Bros., on Nellie Posch; 4, Rettie, on Bessie Posch Nierop 2nd. Heifer, 2 years—1, Gooderham, on Clothilde Maud's Canary; 2, Hulet, on Pauline Colantha Tensen; 3, Wood, on Princess Calamity Posch De Kol; 4, Macklin, on Retta Hengerveld Posch. Heifer yearling, senior—1, Haley Bros., on Ida Veeman; 2, Clarkson, on Daisy C. Burke; 3, Trotheway Model Farm, on Dread 3rd Twin; 4, Sangster, on Rhoda Queen Princess. Heifer, yearling, junior—1 and 2, Haley Bros., on Homewood Faforit Mercena and Kate Abbekerk; 3, Hulet, on Madam Posch Abbekerk; 4, Gooderham, on Jennie De Kol of Manor. Heifer calf, senior—1 and 5, Haley Bros., on Aggie Toitella of Riverside and Corea Fairmont Howtie; 2, 3 and 4, Rettie, on

Queen Bonheur Mercena, Sadie Mercena Posch, and Rosa Bonheur Mercena. Heifer calf, junior—1 and 2, Haley Bros., on Colantha Fayne and Grace Fayne Abbekerk; 3, Rettie, on Iantha Jewel Francy; 4, Gooderham; 5, Mackenzie. Senior female champion, Ianthe Jewel Mechthilde 3rd; junior champion, Colantha Fayne. Grand champion, Ianthe Jewel Mechthilde 3rd. Four animals, progeny of one bull, to be under 2 years—1 and 2, Haley Bros.; 3, Hulet; 4, Rettie. Herd, one bull and four females, over one year old, owned by exhibitor—1, Sangster; 2, Rettie; 3, Haley Bros. Young herd, one bull and four females, one year old and under three—1, Haley Bros.; 2, Rettie; 3, Hulet; 4, McKenzie.

JERSEYS.—The Jersey breed, in which the awards were well placed by Prof. M. A. Scoville, Lexington, Ky., were as strong in numbers as last year, and stronger than ever in individual merit and uniformity of approved type, and certainly made a splendid showing for the breed, every section of the prize list being well filled, the entries totalling considerably over 100, and coming principally from the well-known herds of Sir William Mackenzie, Kirkfield; B. H. Bull & Son, Brampton, and David Duncan, Don, the honors being well distributed, with general satisfaction.

In the aged bull section appeared for the fourth time at Toronto, in as many years, Mackenzie's elegant imported bull, Pearl of Kirkfield, in his eight-year-old form, looking nearly as fresh, and moving as actively as ever. His condition is creditable to his caretaker, and his style and finish of form and quality render him practically invincible in the show-ring, he having won the male grand championship at the Canadian National four years in succession, and this year against stronger competition than ever before, his rivals being the three Island-bred bulls of the Brampton herd, namely, King Edward, Eminent Raleigh and Jolly Oakland, and the Don herd sires, Brilliant's Golden Fern and Fontaine's Boyle, all strong show bulls. In the two-year-old class, the Brampton herd supplied the first, second and third prizewinners in Sir Robert, Brampton Stockwell, and Eminent Fox. In the yearling class, the Kirkfield herd had the winners, first on imported Fontaine's Knight, an extra-good one, and second on Gray Una's Kirkfield; while in both the senior and junior bull calf sections the Brampton herd produced the first and second winners. The winning senior calf, of ideal type and quality, is the first son of Brampton Stockwell, whose progeny in the herd, though he is yet young, proclaim him a singularly successful sire. In the aged cow section, Kirkfield was first and second with two grand imported cows, Meadow Grass 2nd and Inverness Queen, the former a Royal Show winner, the latter having a high-class milk and butter record in an Island test. Lady Primrose, from the Don herd, which had in former years at the National won premier honors, made an excellent showing for her age on this occasion, and came into third place over Aristocratic Fancy, of the Brampton herd, a wealthily furnished matron of the profitable producing class. Mansella's Rose, of the Kirkfield herd, a model type, won first in the three-year-old cow section, followed by three of the Brampton contingent, including Brampton Rochette, by Rochette's Golden Lad; Fontaine Rose, by Golden Fern, and Lady George, whose two-year-old official record of 1,104 pounds milk and 536 pounds butter, producing her second calf within fifteen months, is claimed as a Canadian record for her age. The Brampton herd scored first and second in two-year-old heifers, with imported Brampton Perry Floria and Brampton Gold Mark Jess, of fine quality. Brampton won for yearling heifer in milk with Fontaine Ril, and Kirkfield scored with yearling out of milk; while for senior heifer calf it was Brampton first, and for juniors, Kirkfield.

The male championship awards, senior, junior and grand, and also the senior and grand for best female, any age, went to the Kirkfield herd, and the junior male champion was found in the Brampton herd. Bull, three years and over one—1, Mackenzie, on Pearl of Kirkfield; 2, Bull & Son, on Brampton Eminent Raleigh; 3 and 4, Duncan, on Brilliant's Golden Fern and Fontaine's Boyle. Bull, 2 years—1, 2 and 3, Bull & Son, on Brampton Sir Robin, Brampton Stockwell, and Brampton Eminent Fox. Bull, 1 year—1 and 2, Mackenzie, on Fontaine's Knight, and Gray Una's Kirkfield; 3 and 4, Duncan, on Marjoram's Noble Fern and Zoda's Duke. Bull calf, senior—1 and 2, Bull & Son, on Brampton Goldmont and Brampton Good Gold; 3 and 4, Mackenzie, on Kirkfield's Beulah and Kirkfield's Miranda. Bull calf, junior—1 and 2, Bull & Son, on Brampton Henrietta's Son, and Nameless; 3, Duncan, on Boyle's Distinction; 4, Mackenzie on Kirkfield's Eminent. Bull, senior champion, Pearl of Kirkfield; junior champion, Fontaine's Knight. Grand champion, Pearl of Kirkfield.

Cow, 4 years and over—1 and 2, Mackenzie, on Meadow Grass 2nd of Kirkfield and Invernia's Queen of Kirkfield; 3, Duncan, on Lady's Primrose of Don; 4, Bull & Son, on Aristocratic Fancy. Cow, 3 years—1, Mackenzie, on Mansel-

la's Rose; 2, 3 and 4, Bull & Son, on Brampton Rochette, Brampton Alicante, and Brampton Fontaine Rose. Heifer, 2 years—1 and 2, Bull & Son, on Brampton Perry Floria and Gold Mark Jess; 3 and 4, Mackenzie, on Kirkfield's Mabel and Kirkfield's Invernia. Heifer yearling, in milk—1 and 4, Bull & Son, on Brampton Fontaine Ril and Brampton Duchess; 2, Mackenzie, on Iris Belle 5th; 3, Duncan, on Cora of Don. Heifer yearling, out of milk—1, 3 and 4, Mackenzie, on Kirkfield's Sultana, Invernia Princess 2nd, and Kirkfield Chimes; 2, Bull & Son, on Brampton Foxy Olive. Heifer calf, senior—1, 4 and 5, Bull & Son, on Brampton Kentucky Girl, Brampton Fontaine Queen, and Brampton Foxy Minette; 2 and 3, Mackenzie, on Kirkfield's Mabel Beulah and Kirkfield's Dentonia. Heifer calf, junior—1 and 4, Mackenzie, on Kirkfield's Beulah's Mate and Kirkfield's Pampass; 2 and 5, Bull & Son, on Brampton Rosary and Brampton Babe; 3, Duncan, on Agathe's Jane. Champion female, senior, Meadow Grass 2nd, of Kirkfield; junior, Brampton Fontaine Ril. Four animals, the get of one sire—1, Bull & Son, on get of Arthur's Golden Fox; 2, Mackenzie, on get of Pearl of Kirkfield; 3, Duncan, on get of Fontaine's Boyle. Cow with two of her progeny—1, Bull & Son, on Fontaine Rose; 2, Mackenzie, on Invernia's Queen of Kirkfield.

Swine.

Numerically, other years have seen the swine exhibit fully as strong as this, and in some classes of just as high a quality, while other classes, in the matter of type and quality, were never so strong. Evidence of the increased interest taken by the public generally, and the city people in particular, in the source of one of the greatest food staples of the civilized world, was seen in the throngs that continually passed up and down the aisles, and many flattering words were heard, not only from our own people, but from those across the line, as well, of the general high-class character of the exhibit and the splendid fit in which they were brought out. Some new faces were observed among the exhibitors, notably Mac, Campbell & Son, of Norwood, and Geo. G. Gould, of Edgar's Mills. The total entry of the various breeds was about 284, made up as follows: Berkshires, 73; Yorkshires, 50; Tamworths, 39; Chester Whites, 34; Hampshires, 45; other distinct breeds, 43.

YORKSHIRES.—For several years past, visitors to the Yorkshire barn were certain to find the pens filled with the world's greatest in Yorkshires, from the three great breeding firms, D. C. Flatt & Son, of Millgrove; Jos. Featherston & Son, of Streetsville, and Jas. Wilson & Son, of Fergus. This time the Wilson herd was not out, leaving the fight to the two first named, with an occasional entry from Stephen Oliver, of Lindsay and Robert Harrison, of Brampton. Reports of the Yorkshire exhibit at Toronto, in the various agricultural papers, are wont to elaborate on the general high-class character of the exhibit, and, while praise has been deserved in past years, strictly high-class character, quality, breed type and superior fitting were never so much in evidence as in 1911. This is particularly true of the Millgrove herd, practically every animal of which was bred by the exhibitors. Special mention might be made of the class for sows one year and under two; it is doubtful if any other one herd in any country could put in the ring a trio of more remarkable specimens of breed and type perfection. Another that deserves special mention was the entry from the Streetsville herd in the class for boar over six and under twelve months. He is truly a grand animal, put up on championship lines. Following was the order in which the awards were placed by the well-known and popular judge, Wn. Jones, of Zenda: Boar, 2 years and over—1, 2 and 3 went to Flatt & Son, the first on the 1,200-pound Summer Hill Worsley 4th, a step up from 1910 at this same show, when he had to be content with second place; second went to S. H. Jack (imp.), who one year ago carried of the championship, the premier honors this year going to S. H. Worsley 4th. Fourth prize was for the Streetsville entry, on a magnificent hog, but out of fit. Boar over 1 and under 2 years—1, 3 and 4, Flatt; 2, Featherston. Boar over 6 and under 12 months—1 and 2, Featherston; 3 and 4, Flatt. Boar under 6 months—1, Flatt; 2 and 3, Featherston; 4, Harrison. Sow, 2 years and over—1 and 3, Flatt; 2 and 4, Featherston. Sow over 1 and under 2 years—1, 2 and 3, Flatt; 4, Featherston. Sow over 6 and under 12 months—1, 2 and 3, Flatt; 4, Featherston. Sow under 6 months—1 and 2, Flatt; 3 and 4, Featherston. Best sow, any age, Flatt. Herd—1, 2 and 3, Flatt; 4, Featherston. Progeny the get of one boar—1 and 2, Flatt; 3, Featherston.

BERKSHIRES.—The Berkshires were judged by Peter McEwen, of Kertch, whose ability and impartiality are not questioned. Although his task in several of the sections was not an easy

one, owing to the remarkable uniformity of the several entries, his awards were generally satisfactory to the onlookers, if not in every case to the exhibitors. The exhibit on a whole was equal to that of several past years, although we have seen better fitting than was in evidence in some of the entries. The Berkshire, as an all-round farmer's hog, is ever popular, probably never more so than now, and the entries this year were generally high-class and modern in type. The principal exhibitors were: Sam Dolson & Son, Norval; Frank Teasdale, Concord; P. W. Boynton & Son, Dollar; Adam Thompson, Shakespeare; W. A. Shields, Milton, and Geo. Wood, Islington. Following is the order of awards: Boar, 2 years and over—1, Shields; 2, Dolson; 3, Thompson; 4, Wood. Boar over 1 and under 2 years—1, Teasdale; 2, Boynton; 3, Dolson. Boar over 6 and under 12 months—1, Teasdale; 2 and 3, Shields. Championship, Shields, on his aged entry. Sow, 2 years and over—1, Thompson; 2, Dolson; 3, Boynton. Sow over 1 and under 2 years—1, Thompson; 2 and 4, Dolson; 3, Boynton. Sow over 6 and under 12 months—1, Thompson; 2 and 3, Shields; 4, Boynton. Sow under 7 months—1 and 2, Shields; 3 and 4, Dolson. Championship, Thompson. Herd—1, Thompson; 2, Shields; 3, Dolson; 4, Boynton. Progeny, the get of one boar—1, Shields; 2, Dolson; 3, Teasdale. Progeny, the produce of one sow, went the same.

TAMWORTHES.—This year the Tamworth exhibit was too one-sided to create much interest for the onlookers. The usual high-class character of the Mitchell herd of D. Douglas & Sons was this year out stronger than ever, and showing very little the worse for their long journey to Regina and back, where they captured practically everything hung up. Their competitors this year were the entries of T. Readman, of Erindale, and John McKenzie, of Willowdale. In the aged boar class Readman got second place; in the class for boar 1 year and under 2, Readman got third; in class for boar over 6 and under 12 months, Readman got third and fourth; while in that for sow over 6 and under 12 months, he got fourth. All the other prizes, including all the herd and progeny sections, went to the Mitchell herd. The awards were placed by the well-known breeder, A. A. Colwill, of Newcastle.

HAMPSHIRE.—The Hampshire or White-Belted was this year for the first time given a separate class, and the large entry and general excellence of the exhibit showed that the move was appreciated. The breed is comparatively new to this country, but has been bred with success for many years in many States of the Union. Characteristics that recommend them are easy-feeding qualities, early maturity, and moderately good bacon type. They were exhibited by Hastings Bros., of Crosshill; O'Neil & Son, Birr, and Porter Bros., Appleby, the first two being the principal exhibitors, Porter Bros.' exhibits being confined to the aged boar class, where they were again successful in landing first and afterwards championship, this being the third year in succession that this great hog has landed these much-coveted honors, second and third going to O'Neil & Son, which were the only other entries out. In the class for boar over 1 year and under 2, O'Neil and Hastings were alone in the entry, O'Neil winning first on a massive hog, with masculine character stamped all over him, O'Neil getting second and third on a nice, smooth pair that showed more quality, but not so much size. The same two exhibitors came together in the class for boar over 6 and under 12 months, first going to Hastings on a full brother to Porter's champion, second to the same firm, O'Neil having to be content with the white ribbon. Boar under 6 months brought out a much larger entry, Hastings again coming to the front, O'Neil second, and Hastings third. Sow two years and over brought out an entry of four, two from each of the competitors, the O'Neil pair being considered handicapped by being about due to farrow, which, of course, put them off bloom; but, despite that, many of the onlookers thought they would win, but the judge thought differently, giving first to Hastings on a big smooth deep sow that showed evidence of overfitting, third going to the same firm, and second to O'Neil. Sow over 1 and under 2 years—Hastings had the goods in this class, getting first and second, O'Neil third. Sow over 6 and under 12 months—O'Neil third. Sow top in this class, with Hastings second and third. Sow under 6 months—This, too, was O'Neil's class, he getting first and second, Hastings third. O'Neil's winner in this class was afterwards graced with the championship honors. Herd prize of one boar and two sows went, Hastings first and third, O'Neil second. As a special for this breed, the Hampshire Association donated a \$250 silver cup for best four pigs under 6 months of age, the produce of one sow, bred and owned by exhibitor. This splendid cup was won by the Crosshill herd of Hastings Bros., on a quartette that showed remarkable uniformity of type and quality. The awards, made by George Douglas, of Mitchell, were generally satisfactory.

CHESTER WHITES.—This ever popular breed was again this year, as for several years past, represented by the two noted breeders, D. DeCourcy, of Bornholm, and W. E. Wright, of Glanworth. Year after year sees a battle royal between these two famed breeders for premier honors, a battle that this year appeared to be a little more edged than usual, both having their entries out in particularly good fit, and of a type and quality considerably above that of former years. The awards were made by the well-known expert, W. J. Garbutt, of Belleville, and pretty evenly divided, DeCourcy getting the best of the boar sections, and Wright coming out better in the sows. Following are the placings: Boar, 2 years and over—1 and 2, DeCourcy; 3, Wright. Boar, 1 and under 2 years—1 and 2, DeCourcy; 3, Wright. Boar, over 6 and under 12 months—1, Wright; 2 and 3, DeCourcy. Boar, under 6 months—1 and 2, DeCourcy; 3 and 4, Wright. Championship—DeCourcy, on his aged entry. Sow, 2 years and over, brought out a quartette that would do great credit to any of the more pronounced bacon breeds, Wright getting 1st and 3rd, DeCourcy 2nd and 4th. Sow, over 6 and under 12 months, reversed the order of other sow classes, DeCourcy getting 1st and 2nd, and Wright 3rd and 4th. Sow, under 6 months—1, 2, 4, Wright; 3, DeCourcy. Championship—Wright, on his aged entry. Herd—1 and 3, DeCourcy; 2 and 4, Wright.

ANY OTHER BREED.—In the class for other distinct breeds, those represented were the Duroc-Jerseys, by Mac. Campbell & Son, of Norwood; Poland Chinas, by Geo. G. Gould, of Edgar's Mills, and Black Essex, by Jos. Featherston & Son, Streetsville. Some exceptionally choice representatives of those breeds were brought out, true to breed type and splendidly fitted, a credit to their exhibitors. This is the first time for several years that Duroc-Jerseys and Poland Chinas were out at this exhibition. There are many admirers of these breeds in Canada, and next we hope to see them out in increased numbers. They were judged by Geo. Douglas, of Mitchell, and A. A. Colwill, of Newcastle, whose placings were as follows: Boar, 2 years and over—1 and 3, Featherston; 2, Campbell. Boar, over 1 and under 2 years—1, Campbell; 2, Featherston; 3, Gould. Boar, over 6 and under 12 months—1 and 2, Campbell; 3, Featherston. Boar, under 6 months—1, Featherston; 2, Gould; 3, Campbell. Sow, 2 years and over—1, Featherston; 2 and 3, Campbell. Sow, over 1 and under 2 years—1 and 2, Campbell; 3, Featherston. Sow, over 6 and under 12 months—1 and 2, Gould; 3, Campbell. Sow, under 6 months—1, 2 and 3, Campbell. Herd—1, Featherston; 2, Campbell; 3, Gould. Both the progeny prizes went to Gould, the others not having entries; Featherston winning both the championships.

EXPORT BACON HOGS.—The bacon hogs were judged by Wm. Jones, of Zenda, and A. A. Colwill, of Newcastle, and exhibited by D. C. Flatt & Son, of Millgrove; Jos. Featherston & Son, of Streetsville; D. Douglas & Sons, of Mitchell; John McKenzie, of Willowdale, and Hastings Bros., of Crosshill. Other years have seen a bigger entry in this class, but this year brought out some outstanding winners, the Millgrove entry being particularly strong and remarkably uniform. Both the Streetsville and Mitchell entries were up to a high standard and well fitted. 1 and 2 went to Flatt; 3 and 5 to Featherston, and 4 to Douglas.

Sheep.

Sheep-breeders agreed that the intense heat and protracted drouth of the season made it very hard to get the stock, especially the younger stuff, in the best of show condition, yet while a few of the lambs may have evinced signs of short pasture, the exhibit, on the whole, was a credit to the exhibitors, and to the Canadian National. There may have been larger numbers out in some previous year, and in some classes the quality may have been higher, but considering that this year's exhibit was composed largely of home-bred stock, and that this stock had quality enough to compare favorably with the best of imported sheep, the display in the well-filled pens was very gratifying. This speaks well for the skill of Canadians as breeders and feeders, and also for Canada as a sheep-raising country. It is the best advertisement that breeders can have to produce prizewinners from their flocks which have been bred by themselves. Any thoroughly competent judge of sheep can purchase animals from other flocks, or in other countries, that can win the prize money, but it is a different matter for the stockman to breed and feed the animals himself. That Canada's sheep trade is in competent hands was quite evident from looking over the large number of extra choice individuals, and it is to be hoped that this telling advertisement will stimulate trade by impressing the good chances which are possible with this valuable class of live stock so vividly upon farmers that many will purchase foundation flocks and commence sheep-breeding.

LEICESTERS.—These were the first to be judged, and furnished classes which were only placed after the prolonged deliberation of the

judge, John Orr, of Galt, Ont. Five flocks were out, and the competition was keen in every class. The class for ewe lambs had fourteen representatives, while the shearing ewe and shearing ram classes had a dozen each, with the others nearly as large, and all the animals very choice and fit to be used as breeders in any flock. The Leicester men were proud of their showing, and justly so. The exhibitors were: H. & N. Allin, Newcastle; John Kelly, Shakespeare; A. & W. Whitelaw, Guelph; A. W. Smith, Maple Lodge, and Jas. Snell & Sons, Clinton, all of Ontario. The first-prize ram lamb was bred by John Kelly, and purchased by Messrs. Whitelaw after being entered.

Awards: Ram, two shears and over—1, A. W. Smith; 2, Jas. Snell & Sons; 3, A. & W. Whitelaw. Ram, shearing—1, Snell & Sons; 2, Smith; 3, Whitelaw. Ram lamb—1, 3 and 4, Whitelaw; 2, John Kelly. Ram, best, any age—Smith. Ewe, 2 shears and under 3—1, Snell; 2 and 3, Smith. Ewe, shearing—1 and 2, Smith; 3, Snell. Ewe lamb—1, Whitelaw; 2, Smith; 3, Snell. Whitelaw. Ewe, best, any age—Snell. Pen, 1 ram lamb and 3 ewe lambs, bred by exhibitor—1, Whitelaw; 2, Smith. Pen, 1 ram, 2 ewes, 1 year old and under 3, and 2 ewe lambs—1, Smith; 2, Whitelaw. Pen, Canadian-bred, bred by exhibitor—1, Snell; 2, Smith. Wether under 2 years—1, Whitelaw; 2, Snell.

OXFORDS were the second breed to be placed, and while only two breeders were out, the stock shown was of very good quality, especially that of P. Arkell & Sons, Teeswater, Ont., who had out an exceptionally strong flock which took most of the prize-money. The other flock was exhibited by D. & A. Salmon, Sinclairville, and while not as highly fitted as the Arkell flock, the sheep were good representatives of the breed, and for home-bred stock made a fair showing. John Miller, Jr., Ashburn, made the awards. The Arkell flock captured all the prizes, with the exception of third in the ram lamb class, fourth in the ewe lamb class, and first on pen of four lambs, either sex, which went to Salmon.

COTSWOLDS.—Judged by A. Thompson, Duart, comprised exhibits by Norman Park, Newark, Ont.; Geo. Allen, Burford, Ont., and John Miller, Jr., Ashburn, Ont. While not forward in great numbers, the high quality of the individuals in the various classes made the competition quite keen, and the money was fairly well divided, with Park receiving the lion's share. Awards: Ram, aged—1 and 2, Park; 3, Allen. Ram, shearing—1, Park; 2, Allen. Ram lamb—1 and 2, Miller; 3 and 4, Park. Ram, best, any age—Park. Ewe, aged—1, Park; 2 and 3, Allen. Ewe, shearing—1, 2 and 3, Park. Ewe lamb—1, 2 and 3—Miller; 4, Park. Ewe, best, any age—Park. Pen, 1 ram lamb and three ewes, bred by exhibitor—1, Park; 2, Allen. Pen, 1 ram, 2 ewes one-year-old and under three, and 2 ewe lambs—1, Park; 2, Allen. Pen Canadian-bred—1, Park. Wether under two years—1, Allen.

SHROPSHIRE.—J. C. Duncan, of Lewiston, placed the awards in this breed, and his work was cut out for him from the start to the finish, every class being well filled with low-set, thick, heavy sheep, woolled from the nose to the toes, and brought out in fine condition. A large number of the entries were Canadian-bred stock, but there was also a large percentage of imported entries, and in the shearing ram class the first four in line were bred by Buttar. This was an exceptionally strong class, and it took considerable time to make the final decision, Campbell eventually winning with a very strong and exceptionally well-covered sheep. In fact it was impossible to single out any one section as superior, for all of them were classy. Campbell's aged home-bred ram was champion. This ram won here last year. The exhibitors were C. Hodgson, Brantford; J. & D. J. Campbell, Woodville; G. W. Gurney & Sons, Paris; J. G. Hamner, Burford; J. Lloyd-Jones, Burford, and J. R. Kelsey, Woodville. Awards: Ram, aged—1, Campbell; 2, Lloyd-Jones; 3, Hodgson. Ram, shearing—1, Campbell; 2, Hodgson; 3, Gurney. Ram lamb—1, Campbell; 2, Lloyd-Jones; 3, Hamner; 4, Kelsey. Ram, any age—Campbell. Ewe, aged—1 and 2, Campbell; 3, Hamner. Ewe, shearing—1 and 3, Hodgson; 2, Gurney. Ewe lamb—1 and 3, Hodgson; 2 and 4, Campbell. Ewe, any age—Hodgson. Pen, 1 ram lamb and 3 ewe lambs bred by exhibitor—1, Campbell; 2, Lloyd-Jones; commended, Kelsey. Pen, 1 ram, 2 ewes one-year-old and under three, and 2 ewe lambs—1, Hodgson; 2, Campbell. Pen, Canadian-bred—1, Campbell; 2, Hamner. Wether, under 2 years—1, Lloyd-Jones; 2, Campbell. Flock, one-year-old or over, 1 ram and 3 ewes—1 and 4, Campbell; 2, Gurney; 3, Hamner. Flock, 4 lambs, 1 ram lamb and 3 ewe lambs—1, Campbell; 2, Hamner; 3, Jones; 4, Kelsey. Best ram, any age—Campbell. Best ewe, any age—Gurney. Note.—The prizes in the last four sections were donated by the American Shropshire Registry Association.

SOUTHOWNS were out unusually strong, with all the sections well filled. Judging from the numbers and high-class of the exhibits this grand old mutton breed is gaining in popularity. Individual excellence was noticeable throughout

and the exhibitors and breeders generally have every reason to be proud of the showing their favorites made at the 1911 Canadian National. J. H. Leet, of Mantua, Ohio, placed the awards, and it was no light task. Those exhibiting were Huntlywood Farm, Beaconsfield, Que.; C. Hodgson, Brantford; R. McEwen, Byron; Geo. Baker, Simcoe, and Lloyd-Jones, Burford. Awards: Ram, aged—1, McEwen; 2, Huntlywood Farm; 3, Baker. Ram, shearing—1 and 3, Huntlywood Farm; 2, McEwen. Ram lamb—1, 2 and 3, Huntlywood Farm. Best ram, any age—McEwen. Ewe, aged—1, Huntlywood Farm; 2, Lloyd-Jones; 3, McEwen. Ewe, shearing—1 and 4, Hodgson; 2, Huntlywood Farm; 3, McEwen. Ewe lamb—1 and 2, Huntlywood Farm; 3, C. Hodgson. Ewe lamb—1 and 2, Huntlywood Farm; 3, C. Hodgson. Ewe, best, any age—Hodgson. Pen, 1 ram lamb and 3 ewe lambs, bred by exhibitor—1, Huntlywood Farm; 2, Lloyd-Jones. Pen, 1 ram, 2 ewes one year and under three, and 2 ewe lambs—1, McEwen; 2, Hodgson. Pen, Canadian-bred—1, Huntlywood Farm; 2, Baker. Wether under 2 years—1, Baker; 2, Lloyd-Jones. Special prize, best four lambs—1, Lloyd-Jones; 2, McEwen; 3, Baker.

DORSET HORNS.—Exhibitors numbered five, and each had a good flock out. J. A. Orchard, Shedden; R. H. Harding, Thorndale; H. Theal, Fulton; A. G. H. Luxton, Mt. Forest, and W. E. Wright, Glanworth were the contestants, and the awards were made by D. J. Campbell. Awards: Ram, aged—1, Harding; 2, Theal; 3, Shedden. Ram, shearing—1, Wright; 2, Theal; 3, Harding. Ram lamb—1, Orchard; 2, Harding; 3 and 4, Theal. Ram, best, any age—Wright. Ewe, aged—1, Orchard; 2, Harding; 3, Theal. Ewe, shearing—1, Harding; 2, Orchard; 3, Wright. Ewe lamb—1, Wright; 2 and 3, Harding; 4, Orchard. Ewe, best, any age—Harding. Pen, 1 ram lamb and 3 ewe lambs, bred by exhibitor—1, Harding; 2, Orchard. Pen, 1 ram, 2 ewes one-year-old and under 3 and 2 ewe lambs—1, Wright; 2, Harding. Pen Canadian-bred—1, Harding; 2, Orchard. Wether under 2 years—1, Wright; 2, Harding.

HAMPSHIRE.—This breed was not out in large numbers; J. Kelly, Shakespeare, and P. Arkell & Son, Teeswater, were the largest exhibitors, and the quality of the stock was good throughout. J. C. Duncan, Lewiston, handed out the awards. Awards: Ram, aged—1, Kelly (only entry). Ram, shearing—1 and 2, Kelly. Ram lamb—1 and 2, Arkell; 3 and 4, Kelly. Ram, best, any age—Arkell. Ewe, aged—1 and 2, Kelly. Ewe, shearing—1, 2 and 3, Kelly. Ewe lamb—1 and 2, Arkell; 3 and 4, Kelly. Ewe, best, any age—Arkell. Wether, under 2 years—1 and 2, Kelly. Kelly had the only entries in the pen sections, and won all the first prizes in these sections.

LINCOLNS were judged by the veteran breeder and exhibitor, J. T. Gibson, Denfield. The flocks of A. F. Freehorn, Denfield, and G. & H. Lee, Highgate, were the only ones represented, and the money was well divided. Awards: Ram, aged—1, Lee; 2 and 3, Freehorn. Ram, shearing—1, Freehorn; 2 and 3, Lee. Ram lamb—1 and 4, Freehorn; 2 and 3, Lee. Ram, best, any age—Lee. Ewe, aged—1, Freehorn; 2 and 3, Lee. Ewe, shearing—1, Lee; 2 and 3, Freehorn. Ewe lamb—1 and 4, Lee; 2 and 3, Freehorn. Ewe, best, any age—Freehorn. Pen, 1 ram lamb and 3 ewe lambs, bred by exhibitor—1, Lee; 2, Freehorn. Pen, 1 ram, 2 ewes one-year-old and under three, and 2 ewe lambs—1, Lee; 2, Freehorn. Pen Canadian-bred—1, Freehorn; 2, Lee. Wether—1, and 2, Lee.

Dairy Products.

Dairy products were well up to last year's very high standard, and those in charge felt that this year's show was perhaps a little better than any previous exhibit of cheese and butter at Toronto. The scores while high were not so high as have been known, but this was ascribed as no reflection upon the quality of the exhibits, simply a difference in standard set by the judges. Butter was judged by I. W. Steinhoff and L. A. Zufelt.

Awards: Butter, creamery, salted, best tub or box—1, W. H. Stewart, Frontier, Czebec, score 98.25; 2, J. H. Martin, St. Valentine, Que., 97.75; 3, Jno. Anderson, Renfrew, 97; 4, J. A. Waddell, Strathroy, 96.5. Unsalted, creamery—1, Jno. Anderson, 98.99; 2, H. W. Patrick, St. Thomas, 98.25; 3, W. Waddell, Kerwood, 98; 4, W. H. Stewart, 97.50.

Creamery rolls or prints—1, J. H. Martin, 97.50; 2, H. W. Patrick, 96.50; 3, R. M. Player, Walkerton, 95.50; 4, W. W. Waddell, 95.25.

Creamery, 10-pound packages—1, J. H. Martin, 98.75; 2, Jno. Loggie, Paisley, 98.50; 3, J. H. LeClerc, Foster, Que., 98; 4, W. H. Stewart, 97.75.

Farm dairy tubs of 30 pounds—1, L. B. Gregory, Poplar Hill, 95; 2, J. W. Robertson, Vankleek Hill, 94; 3, S. H. Pugh, Milverton, 94; 4, Maggie Johnston, Bowood, 93.50.

Farm dairy firkin or tub of 20 pounds—1, Mrs. A. Fleming, Milverton, 95.50; 2, Mrs. A. Simpson, Attwood, 95; 3, Maggie Johnston, 94.50; 4, Mrs. A. Thompson, Fergus, 94.

Best basket farm dairy, pound prints or rolls—1, Mrs. S. Wilson, Burlington, 95.50; 2, Mrs. W.

Morgan, Walkerton, 95; 3, S. H. Pugh, 94; 5, Maggie Johnston, 94.

Creamery class—Trophy, value \$50, given to exhibitor with the highest score, and to be won three years in succession. Won by John Anderson, Renfrew.

Cheese: The judges were W. W. Gray, James Bristow and W. H. Murton. R. A. Thompson succeeded in winning for the third time in succession the challenge trophy, valued at \$50, thus coming the permanent possessor of this coveted prize.

June colored—1, D. Menzies, Molesworth, 95.79; 2, R. A. Thompson, Attwood, 95.65; 3, Peter Callan, Woodstock, 95.32; 4, B. F. Howes, Attwood, 95.15; 5, Geo. Empy, Newry, 94.81; 6, J. E. Carter, Picton, 94.33.

July colored—1, Ed. Carter, Gilead, 96.31; 2, D. Menzies, 95.69; 3, B. F. Howes, 94.99; 4, E. D. McKenzie, Ingersoll, 94.82; 5, C. J. Donnelly, Scottsville, 95.33; 6, A. R. Treleaven, Morefield, 94.56.

June white—1, B. F. Howes, 96.49; 2, T. O. Flynn, Tavistock, 96.33; 3, R. A. Thompson, 95.99; 4, D. Menzies, 95.83; 5, W. S. Stoks, Britton, 95.66; 6, Geo. Empy, 94.99.

July white—1, Geo. Empy, 95.99; 2, Jno. Cuthbertson, Sebringville, 95.69; 3, T. O. Flynn, 95.65; 4, B. F. Howes, 95.39; 5, O. R. Francis, Cassel, 95.33; 6, C. J. Donnelly, 95.33.

August colored—1, C. A. Barber, Woodstock, 95.99; 2, Ed. Carter, Gilead, 95.82; 3, R. A. Thompson, 95.65; 4, Geo. Empy, 95.49; 5, H. W. Hamilton, West Moncton, 95.31; 6, J. E. Stedbauer, Listowel, 94.98.

August white—1, R. A. Thompson, 96.49; 2, H. J. Neeb, Tavistock, 95.99; 3, H. W. Hamilton, 95.32; 4, Geo. Empy, 95.15 (won on flavor); 5, W. J. Goodwin, Bismarck, 95.15; 6, D. Menzies, 95.

June Stilton, white or colored—1, H. W. Hamilton, 96.15; 2, R. A. Thompson, 94.49; 3, Geo. Empy, 93.99.

June flats, white or colored—1, R. A. Thompson, 94.99; 2, Geo. Empy, 94.82; 3, Ed. Carter, 94.81.

Sheaf and Grain Exhibits from Standing Field Crop Competitions

Standing field crop competitions create a great amount of interest in the various counties throughout Ontario, and the results of the judging of the threshed grain from these exhibits are always followed with much interest.

The exhibit in this class at Toronto was especially attractive, and received the attention due so important a branch of agriculture. Intermingled with the grain in sacks and the sheaf entries were boxes of the various kinds of fruits produced in the Province, and at a glance the sightseer was impressed with the great possibilities of this old Province, and the whole added interest to the grain exhibit.

Perhaps no other class of crops suffered from the dry weather and heat of the season more than the cereals, but notwithstanding this the grain, while not of extra quality, was a good fair sample, and, considering the unfavorable conditions which were experienced in most localities, made a good showing. Following is a full list of the winners in the different divisions in the sheaf exhibit and the grain exhibit:—

OATS.—Division 1.—1, Wm. Worsfold, Emsdale, Banner; 2, Dennis Shea, Warren, Banner; 3, Jas. Fields, Earlton. Division 2.—1, Thos. Cosh, Bobcaygeon, Yellow Russian; 2, C. H. Thurston, Bobcaygeon, Yellow Russian; 3, Jno. Gibbons, Renfrew, Banner. Division 3.—1, R. M. Mortimer & Son, Honeywood, Reg. Abundance; 2, Alex. McKague, Teeswater, Bumper King; 3, Vernon Farrow, Avon, Garton's Abundance.

FALL WHEAT.—Division 2.—1, Thos. C. Barrie, Canton, Dawson's Golden Chaff. Division 3.—1, W. C. Shaw, Hespeler, Golden Jewel; 2, Jesse Bechtel, Hespeler.

SPRING WHEAT.—Division 1.—1, A. McChesney, New Liskeard, Red Fife; 2, Andrew A. Chester, New Liskeard, Red Fife; 3, Jno. A. Philp, Milberta, Red Fife. Division 2.—1, W. J. Connelly, Cobden, White Fife; 2, Sam McMillan, Cobden, White Fife; 3, Sam McLaren, Cobden, White Fife.

BARLEY.—Division 2.—1, D. I. Ross, Frankford, O.A.C. 21. Division 3.—1, Chas. Edwards, Onondaga, O.A.C. 21; 2, Jas. E. Walker, Tuscarora, O.A.C. 21; 3, T. W. Stephens, Aurora, O.A.C. 21.

OATS.—Division 1.—1, Robt. Ferguson, Powassan, Bumper King; 2, Jas. Fields, Earlton, Sensation. Division 2.—1, D. Sutton, Millbrook, White Giant; 2, Geo. Brown, Millbrook, Dew Drop; 3, C. H. Thurston, Bobcaygeon, Yellow Russian. Division 3.—1, J. A. Cockburn, Aberfoyle, Lincoln; 2, Fred A. Clarke, Headford, \$1,000; 3, Foyston Bros., Minesing, \$1,000.

FALL WHEAT.—Division 3.—1, Jesse Bechtel, Hespeler; 2, Wilbert P. Sparling, Anderson, Dawson's Golden Chaff; 3, W. C. Shaw, Hespeler, Golden Jewel.

SPRING WHEAT.—Division 2.—1, Sam McMillan, Cobden, White Fife.

BARLEY.—Division 3.—1, T. W. Stephens, Aurora, O.A.C. 21; 2, Chas. Edwards, Onondaga, O.A.C. 21; 3, Jas. E. Walker, Tuscarora, O.A.C. 21.

Mistakes in Drainage.

Mistakes in drainage! One scarcely knows where to begin—perhaps the commencement is the best place. Two years ago, in the County of Simcoe, I was making a survey for a man. In the evening one of the neighbors dropped in, and, as the conversation turned on drainage, he proceeded to expound his views. "Drainage is no good," he said. "I put in some tile a few years ago, and got no benefit." A series of questions elicited the facts that he had drained three springy spots on a side-hill, each by means of a 4-inch tile, the three coming together at the base, and that the main from these three drains on steep grade was only a 4-inch tile on a very slow grade! No wonder the flat was wet.

Perhaps the worst mistake of all is to begin wrong.

Looking toward the past, I would say that probably the most common mistake has been the failure to plan properly and correlate the drainage of the different portions of the farm. Owners, thinking of one particular field, and possibly believing that to be the only portion needing drainage, or underestimating the quantity of water to come from higher up, have frequently installed main drains that in a short time proved inadequate. In some cases they have been taken up and replaced by larger tile; in others, two tile



Effect on tobacco of drainage at different depths.

have been laid in the same trench. With labor at present prices, the former does not pay, unless the tile already in are large ones, and the latter is objectionable because the two tile form between them a triangular channel, along which part of the water flows, sometimes washing away the soil where soft spots occur, thus causing one or both of the tile to drop out of position, and partially or wholly block one or both of the tiles. In most cases, the best way to provide outlet for extra drainage is to instal another drain a short distance on one side of that already in.

It is pleasing to note that in recent years the tendency has been toward considering the drainage of the farm in its entirety, and the consequent use of main drains of ample size.

With this broadening of the outlook has come a more minute consideration of all the details. Last summer, while making a survey and holding a drainage demonstration on a farm in Lincoln County, one of our field men had a most interesting example. The owner had done some drainage in the past, and was just doing some more, though not on the ground surveyed. He had a drain dug and the tile laid, but the trench not filled. Since it was laid, there had been a fairly heavy rain. During the demonstration this drain came up for discussion, and our field man was asked to test the grade. He found a sag of half an inch at one point, and the question at once arose whether this impaired the efficiency of the drain. Many held "no," the fieldman held "yes," and to prove the point the tile at the lowest part was taken up. It had half an inch of sediment in it, reducing the capacity of the tile by just that much. Farther down, where the grade was right, the tile was clear. A sag of half an inch is not very serious, but if it had been 3 inches, the tile would have been fully blocked.

The example just instanced should be one of interest to those who claim that an irregularity in the grade is immaterial—"the head will drive the sediment out," or "the suction will draw it out like the water from a siphon." The action would have been just the same, had the trench been filled, but the defect would not have been discovered.

Another of our field men was called in to examine a drain that "didn't work." He found the grade the wrong way from start to finish, although it had been put in by a "practical ditcher." The consideration of these details is leading people to the point where they demand to know not only "whether there is a fall," but "how much fall per 100 feet," and also to demand that he who puts in their drains must have

a method of digging accurately to the grade which they specify.

Here is a case that came to my knowledge a short time ago. A man was engaged to put in a certain ditch. He did so, and received his pay. But the upper portion "didn't work," and the farmer noticed that the dividing point was just at a certain pine stump, which the ditcher was told to "go around." He did so, and started the tile above the stump again.

From these examples from actual experience we draw this lesson: No farmer should allow one rod of tile to be covered until he or some responsible party appointed by him has personally examined it, and satisfied himself that everything is right. I am just preparing a set of specifications for a large system to be put in by contract and one clause is that "no trench shall be even 'blinded' until passed by the inspector."

It is a mistake—at least we think and teach that it is—to put drains in shallow, save in exceptional cases. If the reader will come with me to a field that I will show him, not a hundred miles from where this is written, we will spend a few minutes picking up tile and pieces of tile that the plow share has turned out—a field that was drained years ago by one of the advocates of shallow drainage in this Province.

The soil was a shallow black muck, underlaid with clay, and, what with the soil settling, and possibly as a result of some heaving with the frost, the tile have come so close to the surface that the system is practically destroyed by the plow. Estimates are now being asked for of the cost of re-draining the field. In the meantime, however, the drainage has much more than paid for itself. Better to drain shallow than not at all.

The destruction of a shallow system does not always follow, however, as in some soils there may be no settling, and in others no heaving. But one inevitable result is that the drains do not draw as far as deep ones, and that, therefore, they cannot prove as valuable either in wet or dry seasons. From actual experience, from contact with a large number of farmers who have drained, and from a close study of the scientific principles involved, we have come to believe that, generally speaking, drains should not be less than 2½ feet deep, nor more than 3½. In this connection, the accompanying photograph of five tobacco plants growing in cans drained to different depths may be instructive. On each can is marked in feet the depth to which the soil was drained. All five plants were planted at the same time, and the cans sat side by side in the same greenhouse. The deeper the drainage, the taller and more luxuriant the plant.

It is a mistake, and a grievous one, to put in weak or defective tile. This needs no elaboration.

The points yet to be discussed deal largely with outlets in one aspect or another. It is a common practice, where an open ditch runs along the lower side of the field to be drained, to let each drain empty directly into it. Another plan followed by some is that of running a main tile parallel with the open ditch, at a distance of three or four rods therefrom, and emptying into it as a convenient point at or below the lowest corner of the area to be drained, and having the individual drains empty into this main, instead of into the open ditch. This plan costs more than the other, but it has only one outlet, instead of many. And what if it has? In the present summer one of our field men examined a system of several miles of drains installed in 1910, according to a plan laid out by the Department of Physics. To his surprise, there were some of the outlets he was unable to locate, owing to the accumulation of sediment in the open ditches. From this illustration we draw two conclusions: First, the outlets must be examined from time to time, and kept clear by the removal of sediment, grass, and other obstructions from the open ditches; second, the fewer outlets, the easier to look after, and therefore the plan with main parallel to the open ditch, although costing the more to instal, is preferable.

But there are other outlet mistakes. A week ago I examined an outlet where the tile came right to the open ditch—as is the usual method. Two tile had crumbled with frequent freezing. The drain has only been down three or four years. A few feet at the outlet should be made of material that will last as long as the tile that are in the drains.

Another danger the outlet has to stand is that of being trampled by animals and broken or displaced.

There are various methods of overcoming these dangers. Some lay cement tile for the last few feet, and surround them by a strong cement mortar several inches deep. Others use a length or two of sewer crock. Still others, a few feet of box made from lumber. All these methods have their advocates, for various reasons, and to some, at least, there are obvious objections. A few feet of corrugated metal culvert or incot iron appears to me as better than any of them, though being somewhat more expensive.

As I survey the drainage situation in Ontario to-day, with improved methods of planning and construction being adopted, it appears to me that the mistake or group of mistakes from which we have most to fear, is that of improper outlets improperly cared for. This has been impressed by the example already related, where some outlets could not be found. To my knowledge, that system was properly laid out and properly installed, and at a cost of probably \$2,000. The owner is loud in his praise of drainage, for he had a splendid crop of fall wheat on a large area of land from which he was not accustomed to get such yields. And the system is in danger, unless the outlets are looked after.

Once the system is properly installed, the motto should be, "Look to the outlets."
WM. H. DAY.

A Visitor from South Africa.

Among the visitors from abroad last week at the National Exhibition, Toronto, was W. J. Palmer, Under-Secretary to Louis Botha, Premier and Minister of Agriculture in the new South African Union Government. A good many readers of "The Farmer's Advocate" will remember Mr. Palmer's excellent work some years ago with the Travelling Dairy in Ontario, after which he became associated with the development of the City Dairy in Toronto. After the South African war, earnest steps were taken to reorganize and put upon a more modern and progressive basis the agricultural industries of South Africa, and a number of Canadians were drafted into the work, among them Mr. Palmer. Speaking generally, the development of husbandry there is proceeding upon somewhat similar lines, and by methods corresponding to those which have given Ontario such marked distinction. In the four united provinces there are six or seven experimental farms and three agricultural colleges. There is a great deal of wealth in the country, and the government is most generous in its policy in relation to the industry, upon the development of which three or four million dollars will be expended this year. Dutch farm students are also taking agricultural courses in Canada and Australia, and individuals, as well as government representatives, are abroad picking up choice breeding animals to improve the live stock of the country. It is upon this par-

ticular mission that Mr. Palmer is now in Canada, preparing to ship, via the St. Lawrence, some 50 head of Shorthorns and Holsteins. Creameries are making steady strides, and a great deal of money has been made in sheep husbandry. At the present time, the production of feathers on the ostrich farms is perhaps the most profitable business, some farms realizing £10,000 and £15,000 per year. Live-stock diseases have been a serious obstacle in the past, and the government veterinary laboratory is one of the finest in the world. Successful corn-growing is on the increase, and alfalfa is regarded as the salvation of the country. Those in charge of the agricultural department are closely following the development of the dry-farming system, as applied in the far Western States and in Alberta. Before returning to his work in South Africa, to which he is enthusiastically devoting his life, Mr. Palmer will visit the Canadian West and the Maritime Provinces. He had intended securing some live stock in Great Britain, but, owing to the outbreak of foot-and-mouth disease, could not do so, except in the case of horses, of which he will probably select a few stallions.

Little Peach in Niagara District.

In "The Farmer's Advocate" for August 24th an article was devoted to the disease known as "Little Peach," the increasing prevalence of which is giving concern to some Ontario peach-growers. Two inspectors, Messrs. Kelson and Hunter, with Prof. Caesar, of the Ontario Agricultural College, have been going over the Niagara fruit district for some time, and P. W. Hodgetts, Director of the Fruit Branch, Ontario Department of Agriculture, who the other day returned from the district, reports that probably 50,000 trees are affected, more or less, in the area from the river to Hamilton, North Grimsby and Fonthill Townships having the trouble most seriously. All orchards are not affected, nor every tree in those that are. It has been coming on gradually for about three years, and affects all ages of trees, and some orchards in full bearing have to be destroyed. It is supposed to develop in the nursery stock, and there is a good deal of it in Michigan and New York States. Stern measures are necessary for its suppression, as apparently the one remedy is to uproot and burn the trees, and plant none but stock guaranteed healthy.

The estimated attendance at the Canadian National Exhibition, Toronto, on Monday, Labor Day, was 151,000, the largest in the entire history of the fair.

Drainage Surveying in Quebec.

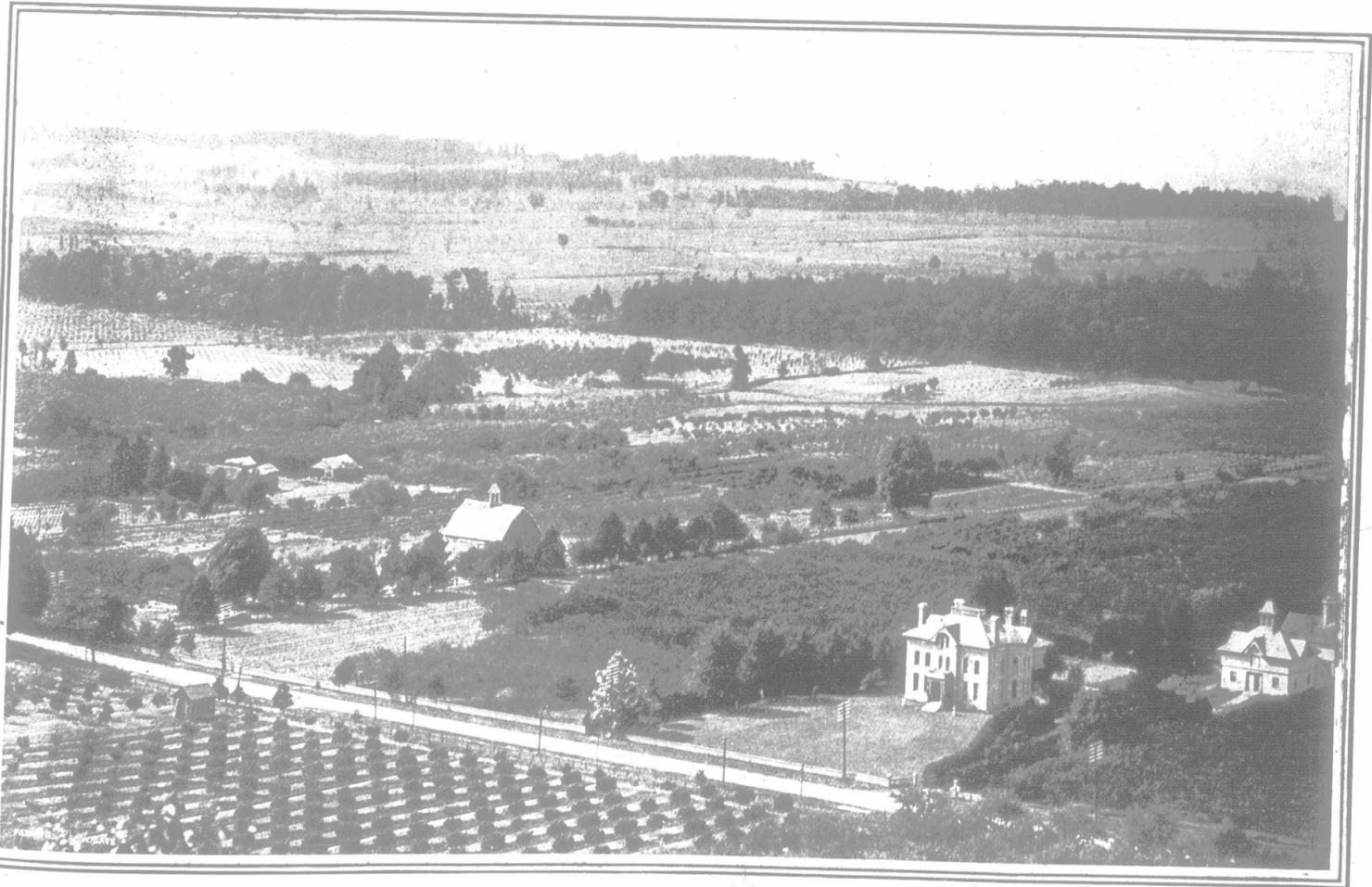
The free farm-drainage survey which has proven so popular in Ontario is being taken up elsewhere. This summer, the Department of Physics of Macdonald College, Que., offered to send a drainage adviser to any farmer in the Province of Quebec, to make a survey, prepare a drainage map, show how to dig drains true to grade, how to lay the tile, how to make joints, etc. The only cost to the farmer for this service would be the surveyor's railway fare, at one cent a mile each way, incidental expenses, board and assistance while making the survey. The work was commenced July 3rd, and will be continued until the end of September. Those wishing to take advantage of the offer are requested to send in their applications at once. As many surveys as possible will be made this autumn, and the remainder early in the spring. It is proposed to continue the work each summer.

Beef-ring Experience.

In answer to a request in a back number of "The Farmer's Advocate" re beef-rings, would say that I have been secretary of the Eversley Mutual Beef Society for the past fourteen years. This society was organized in the winter of 1883-4, and has been running every season since, consequently the present will make twenty-eight consecutive seasons. It started with sixteen members, and continued so until 1906, when it commenced as a twenty-share ring, and has been operated as such since. Our present chart is the one frequently reproduced in "The Farmer's Advocate" (without steak), and we find it very satisfactory.
York Co., Ont. WM. FERGUSON.

Implement Shed for Ottawa Exhibition.

As anticipated some time ago, the display of farm implements at the 1911 Ottawa Fair will be the largest in its history. Already 20,000 square feet of space has been allotted in the machinery shed, and 15,000 in the open outside. In view of the great need for a larger pavilion for the display of farm machinery, the exhibition management have the plans prepared for a new implement shed.



In the picturesque Niagara Peninsula, near Grimsby.

Insect Powder.

Many requests have been received by the United States Department of Agriculture from manufacturers and dealers for a decision giving the position of the Department regarding the use of "insect flower stems" in preparations designated "Insect Powder." A decision upon this point must necessarily depend in great measure upon the meaning of the term "insect powder."

There are a number of powdered substances on the market which are widely used as insecticides. As examples there may be mentioned powdered hellebore, powdered tobacco, and the powdered flowers of certain species of chrysanthemum. At first thought it would seem that the term "insect powder" might be applied to all of these as well as to any other powder which possesses insecticidal properties. A study of the subject, however, has convinced the Board that such a broad and indefinite application of the term is not justifiable, because common usage and trade practice have resulted in a limitation of the term so that, standing alone, it now signifies one definite thing, namely, the powdered flower heads of certain species of chrysanthemum. The reasons which have led us to this conclusion are briefly as follows: The popular and scientific works of reference are in a substantial agreement in declaring that "insect powder" commonly signifies the powdered flower heads of certain species of chrysanthemum. Inquiries made by the Board have developed the fact that among manufacturers and dealers generally, the term "insect powder" is held to signify the powdered flowers of certain species of chrysanthemum (pyrethrum). Furthermore, the Board has evidence from expert scientists supporting this position completely.

The Board holds that the term "insect powder" is used in both a generic and a specific sense, the former applying in cases where no attempt is made to designate a particular article. A similar condition exists in the use of the word "flour." There may be rye flour and rice flour, but the word "flour," standing alone and used to designate a specific article, means "wheat flour." Similarly, there may be hellebore insect powder and tobacco insect powder, but the term "insect powder" used without qualification signifies a definite article, as follows:

The term "insect powder," when used without qualification, means an insecticide made from the powdered flower heads of the following species of chrysanthemum:

1. Chrysanthemum (pyrethrum) cinerariaefolium (Trev.). Bocc.
2. Chrysanthemum (pyrethrum) roseum, Web. & Mohr.
3. Chrysanthemum marshallii, Aschers. (synonym: pyrethrum carneum M. B.).

It naturally follows, from this interpretation, that the term "insect powder," unqualified, can not be properly applied to an article which consists in whole or in part of insect flower stems. The use of powdered stems under such conditions would constitute an adulteration under the law. (Sec. 7: "That for the purpose of this act an article shall be deemed to be adulterated . . . In the case of insecticides or fungicides, other than Paris green and lead arsenate: First, if its strength or purity fall below the professed standard or quality under which it is sold; second, if any substance has been substituted wholly or in part for the article.")

In designating a mixture of powdered flowers and stems, the term "insect powder" may be used, provided this is immediately qualified by word or phrase so as to indicate clearly the nature of the article. The qualifying word or phrase should appear in type sufficiently clear, and in a position sufficiently prominent to attract the immediate attention of the purchaser. In a case of this kind, where the constituent substances are named, the predominating substance should be named first in order.

The principles laid down above governing the use of the term "insect powder," when applied to substances consisting in whole or in part of powdered stems, are to be applied in like manner to all powdered substances intended to be used as insecticides.

The Department has been requested to

decide whether powdered insect flower stems will be regarded as "inert ingredients" under the terms of the Insecticide Act. Investigations to determine the precise value of these powdered stems are now under way. From the information at hand at the present time, it appears that powdered stems have a certain insecticidal value, though distinctly less than the powdered flower heads. In view of this fact, the declaration of powdered stems as inert ingredients will not be required unless further investigation shows this position to be erroneous, in which event suitable notice will be given to the trade.

The terms "Pyrethrum" and "Pyrethrum powder" are, when applied to insecticides, synonymous with "Insect powder."

M. Dorset, M. B. Waite, A. L. Quintance, J. K. Haywood, Insecticide and Fungicide Board.

Approved: James Wilson, Secretary of Agriculture.

Washington, D. C., July 15, 1911.

GOSSIP.

Attention is called to an advertisement in another column of auction sale by George Laithwait, Goderich, Ont. This would appear to be an excellent opportunity to secure a good driver or a grand Jersey cow at a reasonable figure. It will pay to look it up.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.

2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.

3rd.—In Veterinary questions the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Veterinary.

SPINAL TROUBLE.

1. I have a horse that will not stand work. He becomes weak, refuses to eat, goes stumbling about, and sways from side to side with hind part. I have not worked him since spring. He has been at pasture all summer, and he still sways. If made to move quickly he grunts.

2. Is there any cure for dyspepsia?

T. McL.

Ans.—1. The horse's spine is diseased, and a recovery is doubtful. Purge him with 8 drams aloes and 2 drams ginger. Follow up with 2 drams nuxvomica three times daily. To improve appetite and digestion, give a tablespoonful three times daily of equal parts sulphate of iron, gentian and ginger.

2. The above treatment should cure dyspepsia in a horse.

V.

Miscellaneous.

RECURRENT MAMMSTITIS.

Every three or four weeks one quarter of my cow's udder becomes enormously swollen, always in the evening just after milking. By bathing it for two hours with hot water, I have always effected a perfect cure. What causes it? Can it be prevented, and can you suggest any better treatment?

S. T.

Ans.—Recurrent mammitis, without apparent cause, indicates tubercular trouble in udder, but this cannot be definitely determined except by the tuberculin test by a veterinarian, and even this does not locate the disease when it exists, but if the cow reacts to the test, you will be justified in assuming that the disease is the cause of the trouble, in which case the milk would not be safe for consumption. The attacks cannot be prevented, and certainly no treatment can be more successful than yours, as it is not possible to get a complete recovery in a case of mammitis in two hours by the usual treatment, which consists in applying heat to the udder by poultices or bathing, rubbing well three times daily with camphorated oil, and milking three or four times daily. We also recommend the administration of two lbs. Epsom salts and one ounce ginger.

V.

MINERAL FOR ANALYSIS.

Would you please give me information as to how I can have minerals tested, or rather pieces of rock that contain mineral? I saw an article on this subject in "The Farmer's Advocate" some time ago, but cannot find the issue. Will the Government analyze same free of cost? If so, how should it be sent? What quantity should be sent? N. C.

Ans.—We presume that you could get it analyzed, or at least could get information on the subject from the Geological Survey, Ottawa, or you might send samples to Prof. W. G. Miller, Provincial Geologist, Toronto, Ont.

COW FAILING.

Last spring I bought a cow at a sale. She calved in about three weeks. She was in fine condition at time of calving. She milked well for about a week. She has been failing in flesh until she is quite poor. She is a little stiff in hind legs. She chews her cud and looks bright. She has been on good pasture most of the summer. If she continues, she will likely die this winter. J. J. L.

Ans.—It is, of course, impossible for us to diagnose positively in a case of this kind when we cannot see the cow. Would suggest examination by a competent veterinarian, who may see fit to test her with tuberculin.

FORMALDEHYDE AND GERMINATION.

I saw in a recent issue of "The Farmer's Advocate," directions for treating wheat for smut with formaldehyde, and would like to know, through your paper, if there is any danger of destroying the wheat germ, providing the directions are followed carefully? M. P.

Ans.—The formaldehyde treatment for smut, as recommended in the article on "The Wheat Smuts," on page 1385 of "The Farmer's Advocate," issue of August 24th, is quite safe, and if any of the germs are killed, it will only be those which are very weak and from which only sickly plants would be produced. If the directions are followed carefully, no bad results will follow, but where carelessly carried out, and too strong a solution is used, injury is quite possible. The formaldehyde treatment for "Bunt" is the best and most effective means of combating this disease with least possible injury to the seed's germination.

VIEWS UPON THE HEAT.

"You're well off in here," says the farmer, giving his order in a grocer's shop on market day; "you don't need to go out into the sun—there's a nice draft from that door—and you needn't sweat yourself working."

"If you just try a day behind the counter among smells of bacon, soap, and cheese, you'd be wanting out to where you could get some fresh air. You catch the breeze fine in that hayfield of yours, I was thinking when I passed it last night."

"Well, to-morrow's your half-holiday, come and I'll give you a hay rake. You'll maybe find out what a roasting means, and you'll be glad of your shop roof next day."

"It'll be the sort of weather to suit you, Mrs. A.," and the grocer dexterously turned his attention to her.

"Why?" she asked.

"Because you can go out or in as it suits yourself; you're not tied to one place, and you can put off a lot of your work till it's cooler."

"I can't put off picking my fruit and making my jam," she cried, indignant at the suggestion of the coolness of her lot, "and I'd like you men to have one day of it; and it might do you good to stand by a roasting fire ironing your own collars and the children's pinafores for three hours."

At that moment a limp and melancholy schoolmaster came in with a list from his wife. "You people are well off," he said, mournfully, "that aren't shut up a whole day with hundreds of melting children. The Council ought to close the schools a fortnight sooner this year."

"But you haven't to work hard," and the farmer was faintly contemptuous—"a schoolful of children is nothing to a byre-ful of cows when it comes to milking time!"

"Ah, but brain work is trying in a

heavy atmosphere. Physical exercise that makes you perspire freely is refreshing; but the nervous strain of mental work in a close room with the thermometer over 80 degrees . . . you don't know anything about it, you fellows!"

And each felt pleased with the consciousness that he had a more trying occupation than any of the others could understand. We, none of us, like to be behind, even in the trifling matter of suffering from the heat.—Scottish Farmer.

Gems.

There is no beautifier of complexion, or form, or behavior, like the wish to scatter joy and not pain around us. It is good to give a stranger a meal or a night's lodging. It is better to be hospitable to his good meaning and thought, and give courage to a companion—Emerson.

Men thin away to insignificance quite as often by not making the most of good spirits when they have them, as by lacking good spirits when they are indispensable.—Thomas Hardy.

Every man has two educations—that which is given to him, and the other that which he gives to himself. Of the two kinds, the latter is by far the most valuable.—Tynman.

Let it be thy care to suppress and crush evil thoughts at the very first rising. . . . If thou wouldst keep thy soul pure, beware of speculative sinfulness.—Cradock.

Time is an estate, but an estate indeed which will produce nothing without cultivation, but will always abundantly repay the labors of industry.—Johnson.

Being funny has its purpose in the scheme of life. If this world is a vale of tears it is someone's duty to dry them.—Miss Fay Templeton.

Wherever is love and loyalty, great purposes and lofty souls, even though in a hovel or a mine, there is Fairyland.—Kingsley.

Luxury tends to selfishness and coarseness, and the swamping of the higher manhood.—Malcolm J. McLeod.

There is no royal road to higher fame. The man has toiled who wears a glorious name.—Emma C. Dowd.

Friendship is to be valued for what there is in it, not for what can be gotten out of it.—H. Clay Trumbull.

To think and believe ill of our brethren is the very way to make them what we believe them to be.—Hare.

Never did any soul do good but it came readier to do the same again with more enjoyment.—Shaftesbury.

Let the world be better, brighter, For your having trod its way. —Sister Dora.

The poorest education that teaches self-control is better than the best that neglects it.—Sterling.

It is possible to go wrong in many ways; but we can go right in one way only.—Aristotle.

If we from wealth to poverty descend, Want gives to know the flatterer from the friend. —Dryden.

Don't work for wages. Work for the accomplishment of something.—Leslie M. Shaw.

It is cowardice to wish to get rid of everything which we do not like.—Novelsi.

You may as well borrow a person's money as his time.—Horace Mann.

An acre of performance is worth a whole world of promise.—Howell.

When the judgment's weak, the prejudice is strong.—Kane O'Hara.

You want moral patience if you love a man.—Ouida.

Apocryphal Spiritualism. Dr. Russell Wallace once told an amusing experience he had while "ghost-hunting" in a country graveyard.

Walking among the graves one night in the company of the sexton, who claimed to have seen the "shadowy form," Dr. Wallace asked, "Have you any idea whose ghost it was you saw?"

"I can't tell you, sir," was the reply; "but over there lies a man who had three wives. On the stone of the first there is 'My wife,' on the second, 'My dear wife,' and on the third, 'My beloved wife.' If any ghost does walk hereabouts, I should say it is the first wife's."

THE CANADIAN BANK OF COMMERCE

ESTABLISHED 1867

Capital paid-up, \$10,000,000.
Rest, \$8,000,000.

The Canadian Bank of Commerce extends to farmers every facility for the transaction of their banking business, including the discount or collection of sales notes. Blank sales notes are supplied free of charge on application.

Accounts may be opened at any branch of The Canadian Bank of Commerce to be operated by mail, and will receive the same careful attention as is given to all other departments of the Bank's business. Money may be deposited or withdrawn in this way as satisfactorily as by a personal visit to the Bank.

MARKETS

Toronto.

REVIEW OF LAST WEEK'S MARKETS

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

	City.	Union.	Total.
Cars	260	246	506
Cattle	3,272	3,027	6,299
Hogs	5,635	6,076	11,711
Sheep	5,118	2,221	7,339
Calves	653	133	786
Horses		30	30

The total receipts at the two yards for the corresponding week of 1910 were as follows:

	City.	Union.	Total.
Cars	178	163	341
Cattle	2,110	2,756	4,866
Hogs	2,574	1,310	3,884
Sheep	3,961	1,439	5,400
Calves	652	134	786
Horses	6	68	74

The combined receipts of live stock at the City and Union Stock-yards for the past week, show an increase of 165 carloads, 1,403 cattle, 7,827 hogs, 1,969 sheep and lambs; but a decrease of 44 horses, in comparison with the same week of 1910.

Receipts of live stock at the two markets were fairly large, but the quality of the bulk of cattle delivered at the City market was common to inferior; in fact, at both the City and Union yards the quality of the cattle was not as good, although there were a few loads of choice export steers that brought from \$6.25 to \$6.45 per cwt., and some butchers' that sold up to \$6.20. As usual, on Exhibition week, there was a large delivery of common and inferior cattle, for which there was little demand, and for these prices declined from 20c. to 30c. per cwt. at the City market on Thursday.

Exporters.—Export steers sold from \$5.85 to \$6.45; export bulls, \$5 to \$5.25.

Butchers'—Prime picked butchers' cattle sold at \$5.90 to \$6.20; loads of good, \$5.65 to \$5.85; medium, \$5.30 to \$5.60; common and inferior, \$4.50 to \$5.25; cows, \$3 to \$5; bulls, \$3.50 to \$4.75.

Stockers and Feeders.—Receipts of stockers and feeders were fairly liberal, especially of the former, for which there was an indifferent demand. Stockers, 500 to 700 lbs., sold from \$3.50 to \$4.25; feeders, 800 to 900 lbs. each, \$4.50 to \$5.

Milkers and Springers.—A liberal supply of milkers and springers sold from \$45 to \$70 each for good to choice, and common cows sold down to \$30 and \$35 each.

Veal Calves.—Receipts liberal; prices firm, at \$3.50 to \$7.50 per cwt., or an average of \$6.75 per cwt.

Sheep and Lambs.—Receipts have been large, with prices easier, especially for lambs, which have declined about one cent per lb. Ewes, light, \$3.50 to \$4; heavy ewes, \$2.75 to \$3.25; rams, \$3 to \$3.25; lambs sold on Thursday at \$5 to

\$6.25 per cwt., the bulk going under \$6. Hogs.—Market strong, at \$8 to \$8.10 per cwt. for selects fed and watered, while \$7.75 was the ruling price for hogs f. o. b. cars at country points.

BREADSTUFFS.

Wheat.—Ontario No. 2 red, white or mixed, 82c. to 83c., outside points; new wheat, 81c.; none offering. Manitoba No. 1 northern, \$1.07; No. 2 northern, \$1.06; No. 3 northern, \$1.04, track, lake ports. Oats—Canadian Western, No. 2, 43c.; No. 3, 42c., lake ports; Ontario No. 2, 39c. to 40c., outside, and 42c. to 43c., Toronto. Rye—No. 2, 70c., outside. Barley—For malting, 67c. to 68c., outside; for feed, 50c. to 56c. Buckwheat—50c. to 52c., outside. Corn—No. 2 yellow, 67c. f. o. b. cars, bay ports. Peas—No. 2, 78c. to 80c., outside. Flour—Ontario 90-per-cent. winter-wheat flour, \$3.40, seaboard. Manitoba flour—Prices at Toronto: First patents, \$5.30; second patents, \$4.80; strong bakers', \$4.60.

HAY AND MILLFEED.

Hay.—Baled, car lots, on track, Toronto, No. 1, \$13.
Straw.—Baled, car lots, track, Toronto, per ton, \$6 to \$6.50.
Bran.—Manitoba, \$22 per ton; shorts, \$25; Ontario bran, \$22 in bags; shorts, \$24, car lots, track, Toronto.

COUNTRY PRODUCE.

Butter.—Prices firmer, owing to increased foreign demand and a scarcity of good grass in Ontario pastures. Creamery pound rolls, 25c. to 27c.; creamery solids, 25c.; separator dairy, 24c. to 25c.; store lots, 18c. to 19c.

Eggs.—Strictly new-laid, 21c. to 23c. per dozen, in case lots.

Cheese.—Twins sold at 14c.; large, at 13c.

Beans.—Broken lots, \$2.10 to \$2.15 for primes, and \$2.20 to \$2.25 for hand-picked.

Potatoes.—Canadian potatoes quoted at \$1.10 to \$1.25 per bushel, by the load, from farmers' wagons.

Poultry.—Chickens, 16c. to 18c. per lb., dressed; ducks, 14c. to 16c. per lb., dressed; fowls, 13c. to 14c., dressed.

HIDES AND SKINS.

E. T. Carter & Co., 85 East Front street, have been paying the following prices: No. 1 inspected steers and cows, 12c.; No. 2 inspected steers and cows, 11c.; No. 3 inspected steers, cows and bulls, 10c.; country hides, cured, 11c.; green, 10c.; calf skins, 12c. to 15c.; lamb skins, 35c. to 50c. each; horse hides, No. 1, \$3; horse hair, per lb., 33c.; tallow, No. 1, per lb., 5c. to 6c.; wool, unwashed, per lb., 11c. to 14c.; washed, 18c. to 20c.; rejects, 14c. to 15c.

FRUITS AND VEGETABLES.

The Dawson-Elliott Company, wholesale fruit, produce and commission merchants, corner West Market and Colborne streets, Toronto, report Canadian vegetables and fruit as follows: Apples, 20c. to 40c. per basket; thimbleberries, 7c. to 10c. per quart; peaches, best, \$1 to \$1.50 per basket; peaches, closed baskets, 50c. to 75c.; plums, 30c. to 65c. per basket; pears, 35c. to 75c.; canteloupes, 25c. to 40c. per basket; grapes, 20c. to 30c. per basket; cauliflowers, dozen, \$1.50; cabbages, crate, \$2.25; watermelons, 40c. to 50c.; cucumbers, basket, 20c. to 25c.; wax beans, 25c. to 35c. basket; tomatoes, 25c. to 40c. per basket; corn, per dozen, 6c. to 8c.; pickling onions, \$1 to \$1.25 per basket; canteloupes, per case, 30c. to \$1.

Cheese Markets.

Canton, N. Y., 12c.; butter, 27c. Stirling, Ont., 13 5-16c. Campbellford, Ont., 13c. Cornwall, Ont., 13 5-16c. to 13 1/2. Brantford, Ont., 13c. Perth, Ont., 13c. Ottawa, Ont., 13 5-16c. Brockville, Ont., 13c. to 13 5-16c. Alexandria, Ont., 13 5-16c. St. Hyacinthe, Que., 12c.; butter, 25c. Belleville, Ont., 13c. to 13 7-16c. London, Ont., 13 5-16c. to 13c. Cowansville, Que., 13c. to 13 3-16c. Watertown, N. Y., 12c. to 12c. Kemptonville, 13c.

British Cattle Market.

John Rogers & Co., of Liverpool, cable States steers from 13c. to 13c., and Canadian from 13c. to 13c. per lb., being well maintained.

Montreal.

Live Stock.—Exports of cattle from the port of Montreal for the week ending August 26, amounted to 1,472 head, against 1,615 the previous week. The supply of really good cattle was small, and demand was fairly good all round, there being also a number of out-of-town buyers. A clearance was made in the fore part of the week. Choice steers sold at 6c. to 6 1/2c. per lb., good to fine at 5 1/2c. to 6c., and medium at 5c. to 5 1/2c., common ranging down to about 4 1/2c. per lb. Some canners' cattle were sold at 3c. to 3 1/2c. per lb. Local and outside buyers were after small meats, also, and prices held firm all round. Lambs sold freely at 6c. to 6 1/2c. per lb., while sheep sold at 4c. to 4 1/2c. per lb. Good calves were not plentiful, and prices were firm, at \$11 to \$15 each, common stock ranging down to around \$5 per head. Select hogs ranged from 7 1/2c. to 7 3/4c. per lb., mixed at 7 1/2c., and common down to 6 1/2c., weighed off cars.

Horses.—The demand for horses was a little better last week, although there was no activity worthy of mention. Several horses sold for shipment to New Brunswick and the East, the purchasers being in most cases contractors, but in others farmers. A very good class of horses was taken. The supply continues small in the country, and it is not easy to get them. This, dealers seem to think, may be due to farmers holding them back in the hope that they will get better prices after the elections. The market continues steady, at recent prices, however, being as follows: Heavy draft horses, weighing from 1,500 to 1,700 lbs., \$300 to \$350 each; light draft, weighing from 1,400 to 1,500 lbs., \$225 to \$300 each; light horses, 1,000 to 1,100 lbs., \$100 to \$200 each; broken-down animals, \$50 to \$100 each, and choice saddle and carriage animals, \$350 to \$500 each.

Dressed Hogs.—Market ruled steady, demand being fair, at 10 1/2c. to 10 3/4c. per lb., for selects, abattoir-dressed.

Eggs.—The market for eggs was fairly active, and the cooler weather had a good influence on the quality of the stock, although the temperature was still too high to permit of its being all select. Dealers were apparently compelled to advance their bids somewhat, and it was difficult to get really nice stock at less than 18 1/2c. country points. This sold at 21c. to 22c. per dozen for No. 1 candled here, selects ranging around 26c.

Butter.—The market for butter continued to advance, and seldom before have prices at this season stood at such a high level as last week. The States have had some influence in the matter, having made some purchases lately at 25c. Prices jumped in the country early last week to 26 1/2c. to 26 3/4c. per lb., so that sales could not be made any longer, of latest makes, at less than 26 1/2c., and dealers were going to put prices to growers up to 27c. This is still somewhat below United States figures, although the duty prevents much export from here. By Monday, however, the market had eased off, and prices stood at 26 1/2c. The English market, however, continues to buy, and exports since the beginning of the season have been 80,000 packages, or four times as much as a year ago.

Cheese.—Shipments are now leading those of a year ago, being 1,030,000 boxes to date, since May 1st, or only 26,000 behind the figures for 1909. The market is exceptionally high for this time of year, being, if our information is correct, a record. Last week dealers were paying a fraction over 13c. in the country, and quotations here were from 13c. to 13 1/2c. Monday's despatch tells of sales in the country at 13 1/2c. to 13 3/4c., Quebecs being 13 1/2c., selling in Montreal at a quarter cent advance.

Grain.—Market for oats firm. No. 2 Canadian Western, 43c. to 44c. per bushel, ex store, carloads; No. 1 extra feed, 43c. to 43 1/2c., and No. 3 Western, 42c. to 43c.

Flour.—There has been a fair demand for flour of late, and prices held steady, at 5.40 per barrel, for Manitoba patents, firsts, and \$4.50 to \$4.75 for Ontario patents, Manitoba second patents being \$1.90, and strong bakers' being \$4.70 per barrel, while 90-per-cent. Ontarios were \$4 to \$4.10 per barrel.

Feed.—Everything considered, the market is good for this time of year, al-

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though recent rains have greatly improved the pastures and made feeding unnecessary in many sections which were previously stable feeding. Manitoba bran, \$21 to \$22 per ton; shorts, \$24; Ontario middlings, \$25 to \$26 per ton; pure grain mouille, \$31 to \$32; mixed mouille, \$26 to \$29.

Hay.—No. 1 hay, \$14 to \$14.50 per ton, for baled hay, cars, Montreal; No. 2 extra, \$12 to \$13; No. 2 ordinary, \$9.50 to \$10; No. 3 hay, \$8 to \$8.50, and clover mixture, \$7.50.

Hides.—Beef hides, 9c., 10c. and 11c. per lb., respectively, for Nos. 3, 2 and 1, per lb.; calf skins, 13c. and 15c. per lb., respectively, for Nos. 2 and 1; lamb skins sold at 40c. each, and horse hides at \$1.75 each for No. 2, and \$2 for No. 1. Rough tallow, 1 1/2c. to 4c. per lb., and rendered, 6 1/2c. to 7c. per lb.

Buffalo.

Cattle.—Prime steers, \$7.50 to \$7.90; shipping, \$6.25 to \$7.40; butchers', \$5 to \$7.25; heifers, \$4.25 to \$6.50; cows, \$2.25 to \$5.25; bulls, \$3.25 to \$5.25; stockers and feeders, \$3.50 to \$4.85; stock heifers, \$3.25 to \$4.

Veals.—\$5.50 to \$9.75.
Hogs.—Heavy and mixed, \$8.85; Yorkers, \$7.75 to \$8.15; pigs, \$7.40 to \$7.50; roughs, \$6.65 to \$6.80; stags, \$5 to \$6; dairies, \$7.40 to \$8.10.

Sheep and Lambs.—Lambs, \$4 to \$7; yearlings, \$4.50 to \$5; wethers, \$4 to \$1.25; ewes, \$3.25 to \$4; sheep, mixed, \$1.50 to \$4.

Chicago.

Cattle.—Beves, \$5.20 to \$8; Texas steers, \$4.10 to \$6.40; Western steers, \$4 to \$7; stockers and feeders, \$3 to \$5.50; cows and heifers, \$2.25 to \$6.35; calves, \$6.50 to \$9.25.

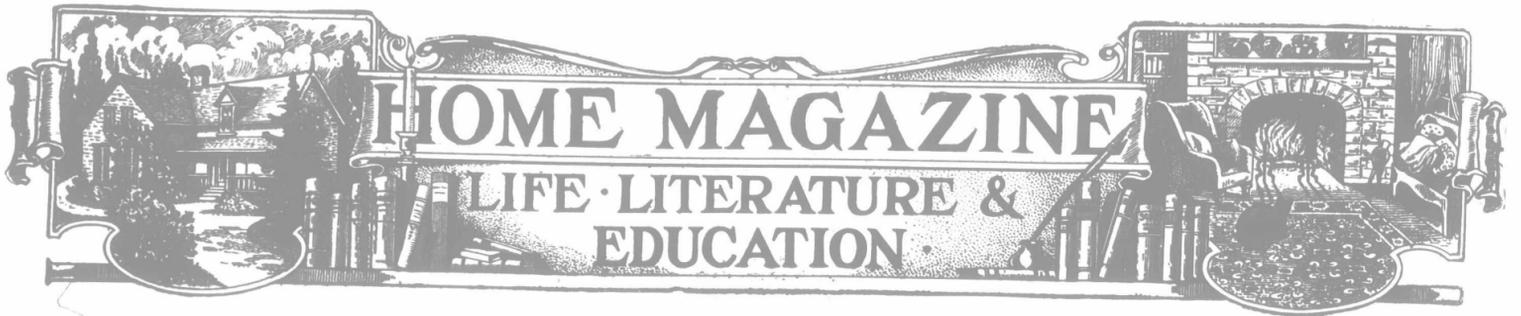
Hogs.—Light, \$7.20 to \$7.75; mixed, \$7.05 to \$7.75; heavy, \$6.85 to \$7.65; rough, \$6.85 to \$7.10; good to choice hogs, \$7.20 to \$7.65; pigs, \$5.50 to \$7.60.

Sheep and Lambs.—Native, \$2 to \$4; Western, \$2.40 to \$4; yearlings, \$4.10 to \$5; lambs, native, \$4 to \$6.55; Western, \$4.65 to \$6.55.

GOSSIP.

LIVE-STOCK JUDGES, CENTRAL CANADA EXHIBITION, 1911.

Horses.—E. C. Tisdale, Beaverton, Ont.; F. C. Grenside, V.S., Guelph, Ont.; Dr. A. H. Fitch, Boston, Mass.; Percy E. Hoge, Frankfort, Ky.; Senator Beith, Bowmanville, Ont.; Wm. Colquhoun, Mitchell, Ont.; Geo. Stewart, Howick, Que.; L. Lavallee, St. Guillaume, Que.
Cattle.—Robt. Miller, Stouffville, Ont.; A. Kains, Byron, Ont.; H. A. Dolson, Alton, Ont.; J. Lorne Logan, Brockville, Ont.; Louis Lavallee, St. Guillaume, Que.; B. Slattery, Ottawa, Ont.
Sheep.—D. G. Hanmer, Burford, Ont.
Swine.—A. A. Colwill, Newcastle, Ont.; Geo. Gray, Hull; John Terrance, Ottawa.
Poultry.—Geo. Robertson, Ottawa, Ont.; F. B. Maunder, Buffalo, N. Y.; Chas. F. Wagner, Toronto.



"The Kirn."

By Annie B. S. Gibson, Whitecastle, Biggar, Scotland. Kirn, is a sort of Scotch Harvest Home Dance, for the farm hands.

The morning of the long-looked-for night had come, and in the kitchen of "Steppbutts" lively scenes were being enacted. No need of the usual "rap doon" for wakening this morning, for long before rising time the ripin' o' the fire and crackling o' sticks could be heard, the clatter o' lassies' tongues, and the patter o' hurrying footsteps. Brooms and dusters were sent flying in all directions, wondering to themselves the why and wherefore of this unaccustomed treatment. A big baking had been done the previous day, and the barn gaily decorated with evergreens, and the kitchen was now being made spic and span, for here the lassies laid their bit wraps, and Betsy and Meg prided themselves in having the bravest kitchen in the parish. The dish-covers adorning the walls were fairly shining; the jelly pan, in its golden beauty, smiled over to its neighbors the candlesticks, and Meg, with all the artistic skill she possessed, was tracing elaborate designs on the stuckie border round the floor. The afternoon came on, and after the milking, Betsy and Meg began their toilettes. Soap and water was made use of in quantity, and the natural hair frizzes came out in fine style. Grand new muslin blouses had been purchased for the occasion, tinsel belts and fancy necklaces; an odor of perfume pervaded the air, and after many a bit keek in the glass, the lassies were ready to receive their guests. One after another trooped in, and soon the kitchen presented an animated scene. Several youths hung about the kitchen door endeavoring to get a peep in, to see if his Jean or Nell had arrived. With lantern light the procession marched to the barn.

The farmer takes up the foreman's wife, and Tom shyly offers his arm to the mistress; the fiddler starts in good form, and, soon to the strains of "Triumph," all are on the floor. Here one sees dancing in real earnest—no meandering round in dreamy waltz, no coat-tails a-flying or swish of ladies' trains, no gentle footfalls, but a firm, martial tread, at times the music being quite inaudible—from quadrille to "Peas Strae," "Flowers o' Edinburgh," "Draps o' Brandy," and "Paddy O'Rafferty," with an occasional song in between, the evening wore on.

The girls seated themselves on one side, and as each dance was announced a general rush was made by the fond admirers opposite, each endeavoring to secure the particular partner he wanted. Some bashful ones found themselves forestalled, and Meg quietly whispered to her chum, "Wull's aye ow'er late in comin' furrit, I'm lifted lang afore he comes." One brave boy from Erin danced a jig, and at eleven o'clock, tea, scones and buns were served; at two a. m., sweets, apples and lemonade, and at four-thirty the company broke up with Auld Lang Syne and three cheers for the master and mistress. The lassies donned their work-a-day garb, and, with sleepy eye and wearied limb, began their various

duties. For days afterwards "The Kirn" was the chief topic of conversation, and Betsy had many a quiet dig at Meg, for Meg and Wull had found the heat too much, and had a bit kirn o' their ain roon' by the hay shed.

Some Good Farm Logic.

"Grumpy people still live in the country, but most of them find their way into the towns, because in the country they must get up with the sun, and must work till the work is done. We have no call, out here, for the boys who shunt their working clothes at exactly six o'clock, and skip out until seven the next morning. They will not like the country, for here they will have to keep very much the same hours as the blue-birds and robins. But some of us like it. We see no hardship in having from eight o'clock until four o'clock for sleep, and after that being obliged to be busybodies and wide-awakes until the day's work is fairly finished, the milking done, and the animals well fed. There is no such thing as being a successful farmer unless you love the work. There are, of course, tribulations, and there is more or less hard luck everywhere, for we cannot always escape sickness and the loss of crops. But it is, in the majority of cases, either bad habits or ignorance that prevents country life from being reasonably pleasant. It does require early hours, and some acquaintance with the dew, and little with the owls; but the old-time task days, that left the machinery and the power with the factories and the towns, is wonderfully changed.

"Instead of our hardships, the popular topic at the picnic is pretty sure to be our privileges. Nobody envies the townsman—who lives in a rented house, breathes what air he can get, pays water rates and gas bills, and stands the din of a sleepless racket. Civilization without Nature is the art of a treadmill. We are learning how to live once more closer to Nature—not as wild children, but as those who see that Nature and art can go together. Let those who really can find no comfort in the country go back to the crowds. We prefer the free air and the birds and the brooks. Country life is always vacation—that is from brick walls and brick pavements, and tent-breathed atmosphere.

"Another topic that is sure to get a good hearing is the rural school. We have got quite by the time for lauding the common school, and the free school, and the High School; what we want now is the common-sense school—not too high, in the sense that it overlooks knowledge necessary on the farm, while it stufts the young people with a lot of facts that they can make no use of. There is a general dissatisfaction with a school system that educates away from the farm. The land-tiller begins to see that, if he is going to make the best of country life, he and his children must have a distinctive training for it. The farmer is about through with schools that exalt the brain and despise the hand. There really is no reason why these two organs should be competitors in our

colleges and universities—certainly not in our town schools. Every man must have an education for his specific life-work. This does not mean a narrow education and information of a purely technical sort, but equally it does not mean that this technical knowledge can be left out, or be made of secondary importance.

"I notice that one of our agricultural colleges has issued a circular, in which it asks to what studies should a young man give his special attention (in a college course) if he desires to remain on the farm. It was exceedingly interesting to hear the comments on this circular at the picnic. One answer was that the boy ought to give a large part of his time to animal and plant life, so that he would comprehend the general principles of animal and plant development. The farm boy must know the things under his feet and over his head—the things he has to deal with every day of his life. Another comment laid emphasis on our rivals, the bugs, and the absolute necessity of comprehending the moths and the fungi. This farmer thought that a knowledge of insects was just as important as that of Holstein cows and Percheron horses. The farmer who is ignorant on such matters must come out second best as a cultivator. A fruit-grower complained that there is a stupid waste in our orchards, from lack of educated knowledge of tree culture. Orcharding is a science, and it needs well-equipped brains, as well as willing hands. In Germany, the vineyardist is seldom an orchardist; but in this country it is thought possible for one grower to cover successfully all branches of fruit-growing. However, I did not discover from the discussion that our farmers desire that their boys and girls shall have a narrow curriculum. The farmer knows that agriculture is coming to the front. He comprehends the fact that his sons must be equipped not only for raising crops, but for guiding in civic affairs. The farmer begins to feel his dignity and assert his independent political position."—[E. P. Powell, in New York Independent.

The Loom of Life.

All day, all night, I can hear the jar
Of the loom of life, and near and far
It thrills with its deep and muffled sound,
As tireless the wheels go always round.

Busily, ceaselessly, goes the loom,
In the light of day and the midnight's gloom,
And the wheels are turning early and late,
And the woof is wound in the warp of fate.

Click, click!—there's a thread of love woven in;
Click, click!—another of wrong and sin;
What a checkered thing this life will be
When we see it unrolled in eternity!

Ah, sad-eyed weavers, the years are slow,
But each one is nearer the end, I know!
And soon the last thread shall be woven in—
God grant it be love instead of sin.

Are we spinners of good in this life-weh—
say?
Do we furnish the weaver a web each day?

It were better, O my friends, to spin
A beautiful thread than a thread of sin!

Hope's Quiet Hour.

Fruit or Leaves.

When He came to it, He found nothing but leaves.—S. Mark xii: 13.

Behold, these three years I come seeking fruit on this fig tree, and find none: cut it down; why cumbereth it the ground.—S. Luke xiii: 7.

When the King walked as a Man amongst men, He often drew His Divine power in order to heal; but once at least He showed that God is not only merciful to sinners, but terrible in His condemnation of sin. The sterner side of the Bible is seldom dwelt on now. We are very willing to look on JESUS as our Friend and Saviour, but how seldom do we think of Him as our Judge. And yet He has told us that He will come again—not as a lowly village workman, but as the Judge of all mankind. What will He do when He comes—as He came to the fig tree near Jerusalem—if He finds no fruit? When the fig tree was discovered to bear nothing but leaves, it was condemned to perpetual barrenness, and it withered away before the terrible curse. It was an object lesson, more telling than any sermon. Is it intended to warn us that a life which produces plenty of leaves but no fruit, will be doomed to go on in fruitlessness?—a terrible penalty, indeed.

The parable which matches the miracle is the one in S. Luke xiii. In it is described a man who comes year after year vainly seeking for fruit on a fig tree in his vineyard, and at last gives the order to cut down a tree which is only cumbering the ground. The gardener pleads for a year's grace, so that he may give it every possible care—he is not willing to destroy if there is any chance of curing.

What lesson should we learn from these parables?—for the miracle was an acted parable, and intended to teach us a solemn truth.

It certainly is one of our Lord's many warnings that sins of omission—or leaving undone the things we ought to have done—are at least as great as sins of commission. It will not be considered a small matter if we are not actively bad, when we are expected to be actively good. When, for many years, a fig tree produces no fruit—nothing but leaves—the terrible order is given, "Cut it down; why cumbereth it the ground?" What would you do if an apple tree in your orchard was covered every year with leaves, but never produced an apple? If you are an up-to-date farmer, you would perhaps write to "The Farmer's Advocate" for advice—and act on it. But, if no culture made any impression on that healthy-looking tree, except to make it produce a more showy display of leaves, would you allow it to take up valuable space in your orchard? I leave you to answer the question for yourself. You may have a very large orchard, but you study each tree—if you are up-to-date—and God has a great many lives to watch, but not one is overlooked. You can never hide from God in a crowd, nor expect to pass His examination by saying, "I am as good as my neighbors." He knows whether that is true, and He also knows, perhaps, that you have been more carefully trained and taught, and should therefore be much better than your neighbors.

The Master comes every day and looks for fruit. Has He found any good fruit in us, or—"nothing but leaves?"

"Nothing but leaves! No garnered sheaves
Of life's fair, ripened grain;
Words, idle words for earnest deeds;
We sow our seeds—lo! tares and weeds
We reap with toil and pain—nothing but
leaves."

But what are leaves and what fruit?
It is a hard question for us to answer
sometimes. To be constantly busy is no
sure proof of fruitfulness, indeed we can
never forget that Martha was reproved
instead of commended for her eager
activity even in good works—she was trying
to serve Christ, and He was better
pleased with the quiet devotion of Mary,
who was only sitting down listening to
Him. If there is one sin of omission
we are very apt to fall into, it is this
very rushing about doing good works,
this filling up every minute of each day,
and omitting—or, at least hurrying
through as if it were very unimportant—
our communion with God. I am not
preaching at you, dear friends; but simply
looking straight at myself, and taking
it for granted that you are like my-
self—which I hope you are not.

A busy life is not always a fruitful
one in the Master's sight. He weighs
motives rather than actions, and wants
us to be inspired by the highest. It is
possible to rise early, and late take rest,
and work all day long, and yet be living
only for this world without a
thought of God or of spiritual things.
If we are busy about our Master's busi-
ness, then all will be right—at least, if
we don't let the Master's work crowd
the Master out of our hearts and
thoughts.

Our Lord's first recorded words are the
declaration that He must be about His
Father's business; and He never wavered
in the pursuit of that high ambition
until He was able to declare confidently,
on the Cross, that the work which had
been given into His hands was
"finished." Whether He was working in
the shop of Nazareth, or offering Himself
on the altar of Sacrifice for the sins of
all the world, He was always doing per-
fectly His Father's business.

Are we really trying very hard to fol-
low in His steps. Is it the business of
our lives—our week-days—to "succeed"
in this life (as the world counts suc-
cess), or is it our business to do the
work God puts into our hands, counting
it success when we have pleased Him,
and failure when we have been cross or
hopeless or ungenerous? If we are ready
and willing to do, not our own will, but
God's, keeping our eyes and hearts on
Him so that we shall know what is His
will, then there must be some fruit to
be found in our lives.

"But what is fruit?" do I hear you
saying? Turn to Gal. v. 22, 23, and
you will know. Are you swayed by
Love? Do you work for love of God
and your neighbor, or only in order to
be thought industrious or kind?

Does Joy fill your heart, so that you
look up into God's Face very often,
thanking Him for His Love, so that
your face shines with gladness as you go
about your ordinary work?

Do you know anything of that Peace
which passeth all understanding—the
peace of One whose heart is resting on
Divine strength and goodness?

Are you gentle and good-tempered in
your dealings with the people about you?
Are you honest in all your dealings, pre-
ferring to be cheated yourself rather than
take an underhand advantage of anyone
else?

Do you really believe that God is Liv-
ing and Near? Or are your ideas about
Him vague and shadowy—as "Provi-
dence," or "A Great First Cause"?

Have you any of the spirit of Meek-
ness, or do you resent the smallest
affront as if it were a deadly insult? If
people call you "touchy," and you call
yourself "sensitive," then it is time to
pray earnestly for meekness.

And have you Temperance—the last
thing on St. Paul's list, and one of the
hardest to gain? It does not mean
wearing a blue ribbon or signing the
pledge—that is a modern explanation of
temperance. But it is the power of
balance, so that we value really impor-
tant things most—in ourselves and
others—and do not rush into extremes
even about the matter of "total ab-
stinence." Many total abstainers from
intoxicants are very intemperate in their

condemnation of those who do not agree
with them.

St. Paul says: "The fruit of the
Spirit is Love, joy, peace, long-suffering,
gentleness, goodness, faith, meekness,
temperance."

If the Master comes and finds in us no
sign of any of these precious graces, then
let us appeal to Him to help us. We
need His help always, even if we are
honestly trying to serve Him, and need
His forgiveness for the poor quality of
even our virtues. And the fruit of the
Spirit must come from the indwelling
Spirit of God in our hearts. All these
things—love, joy, peace, etc.—are inward
and spiritual. The fruit on a tree comes
from the life within the tree, it is not
fastened on from outside—except in the
case of a Christmas-tree. And the fruit
of good works can only come from Divine
Life abiding in us. Works which spring
from selfish or proud motives, are not
what God is seeking for. Our Lord
says that a good tree cannot bring forth
evil fruit, nor a corrupt tree good fruit.
So, if we want Him to find fruit in us,
we must try harder to be good than ever
even to do good.

The Beaver Circle.

OUR SENIOR BEAVERS.

[For all pupils from Senior Third
Continuation Classes, inclusive.]

Senior Beavers' Letter Box.

Dear Puck,—The paper I always watch
for is "The Farmer's Advocate," be-
cause I like to read the letters of your
precious Circle. This is my birthday,
and I am 13 years old now. I tried
my entrance in June, but do not think
I passed. We have a colt and she is
as tame as can be. I had her picture
taken, but I will not send one this time,
as it will take too large a space. Last
year Mr. Hart, an O.A.C. man, of Galt,
gave seeds to several schools around
here, and we were to grow these and
exhibit them at the fall fair in Ayr. I
took O.A.C. barley, and won the first
prize of one dollar. This year I am
taking Lincoln oats. I think this is a

to school every day. I was ten years
old the 19th of August. We have a
colt; its name is Tom. It is bay in
color. I live on a farm, and enjoy
helping mother take care of the baby.
He was seven months old the 14th of
August. I will close, as this is the
first time. I hope this will escape the
waste-paper box. LILLIAN BROWN.
Corinth, Ont. (Age 9, Book Sr. III.).

Dear Puck and Beavers,—I thought I
would like to write to you. I got first
prize for writing at the fair last fall. I
I go to school every day. My teacher's
name is Miss A. B. McDonald. I am
sewing for the fair this year. I like to
read the Beaver Circle letters. I have
a garden, with lettuce, beans (and it
did have peas), potatoes and ornamental
gourds. I have a little baby sister one
year old; her name is Lenora Isabel
Braden. I live on a farm four miles
from Picton and two miles from Bloom-
field. I guess I will close as my letter
is getting too long. Hope this will
escape the w.-p. b.

MYRTLE BRADEN
Picton, Ont. (Age 11, Sr. III. Book).

Dear Puck and Beavers,—This is my
first letter to the Beaver Circle. My
father has taken "The Farmer's Advo-
cate" for some time, and I enjoy reading
the letters very much. When I was
three years old papa moved to the West,
and lived there for seven years. I liked
the West, I think, a little better than
the East. Papa had a sheep ranch,
and owned about 7,000 sheep. I had a
pet lamb named Billy. When Billy was
a lamb we had a pup. The pup would
play with Billy, but I think he played
rather roughly, for he bit Billy's ears,
so that papa had to cut them off. So
we could always know Billy, because he
had no ears. I used to go out when
the band of sheep would come in and
call "Billy! Billy!" and Billy would
come running to get a piece of bread.
We had several other pets too, but none
as nice as Billy. I guess this is all;
hoping to see this printed.

GRACE CROSSON
(Age 11, Book III. Sr.).
Copleston, Ont.

Dear Puck and Beavers,—I am going to
tell you about the first swarm of bees
I hived. One hot day in the month of
June a hive swarmed. It lit in a tree
about seven feet high. I got an old
buggy and put boards from the seat to
the dashboard. I ran the buggy close
to the tree and set a cloth on the boards.
On top of the cloth I set a hive raised
in the front with two little sticks about
one inch high. Then I shook the bees
off the tree onto the cloth. The queen
bee went in and all the rest followed. I
left them there till that night, then I
lifted them and set them beside the other
bee hives. LEVI BLACK
Huntly, Ont. (Age 12, Sr. IV.).

Dear Puck and Beavers,—This is my
first letter to the Beaver Circle. My
father has taken "The Farmer's Advo-
cate" for as long as I can remember.
I go to school very regularly. I passed
for the Senior Third this summer. We
are building a new schoolhouse.

On the 3rd of July we had a Ketcheson
family reunion, in the form of a picnic.
There were over seven hundred invitations
sent out. We had a booth and the Odd-
fellows' Band from the City of Belleville.
We had a very nice time. There were
over seven hundred there.

As I have no pets I will tell you
something about the birds I have seen.
This year we took nature study at our
school. We were told to watch the
birds, then when we came to school we
would tell the teacher what kind of bird
we saw, but if we did not know the
teacher would tell us. I think the king
fisher is a very strange bird. It will fly
about six feet from the water, then when
it has seen a fish it will dart in the
water, get the fish, take it out on the
land and eat it. Some of the birds I
have seen are bobolink, yellow-breasted
chat, American gold finch, red-headed
woodpecker, chipping sparrow and meadow
lark. I think nature study is one
of the nicest subjects we take at school.
It is very nice to study about birds;
most of them do no harm, and I think
it is very cruel to hurt or kill birds.



Giving Kitties an Airing.

And don't let us be unhappy about the
past or discouraged about the future.
To-day is ours. Let us look up and
say:

"Lord, for to-morrow and its needs
I do not pray;
Keep me, my God, from stain of sin,
Just for to-day.
Let me both diligently work
And duly pray;
Let me be kind in word and deed,
Just for to-day.
Let me be slow to do my will,
Prompt to obey;
Help me to sacrifice myself,
Just for to-day.
Let me no wrong or idle word
Unthinking say;
Set Thou a seal upon my lips,
Just for to-day."

DORA FARNCOMB.

good plan, as the exhibitors will learn
something about growing fruits and
grain. I am training a calf, and it
will let me ride on its back, and can
tell what I mean when I say "get up"
or "stand still." My father is a stock-
breeder, and we have about 25 pure-
bred cattle. They will not allow
strangers to go near the calves, but my
father can work with them all. I fear
I have written too much, so good-bye
Beavers. DAVID BROWN
Ayr, Ont. (Age 13, Book Sr. IV.).

You will know by this time whether
you passed or not, David. We hope
congratulations are in order. I hope
you will win a prize for your oats.

Dear Puck and Beavers,—This is my
first letter to the Beaver Circle. My
father takes "The Farmer's Advocate,"
and I enjoy reading the letters. I go

steal their nest or rob their eggs. Hoping to see this letter in print, and wishing the Beaver Circle success.

FAYE KETCHESON
(Age 10, Book Sr. III.)
Wallbridge P.O., Ont.

OUR JUNIOR BEAVERS.

[For all pupils from First Book to Junior Third, inclusive.]

A Boy's First Room.

I've got a room, now, by myself,
A room my very own,
It has a door that I can shut,
And be there all alone;
It has a shelf, a closet, too,
A window just for me;

And hooks where I can keep my clothes
As neat as neat can be.
A lovely paper's on the wall;
A rug is on the floor—
If I had known how fine it was,
I'd had a room before.

I like to go there after school,
Way off from every one;
I felt—well—sort of scared at first,
But now I think it's fun.
The voices of the folks downstairs
Seem faint and far away.

I hear the rain upon the roof;
I watch the birds at play;
Oh, yes, it's often very still,
At night there's not a sound—
But I let mother in, of course,
When bedtime comes around.
—Youth's Companion.

When Peggy Plays.

Peggy's just the gardener's child
Lives down in our lane.
Once I went to play with her,
Want to go again.

Peggy hasn't any toys,
'Cause her father's poor;
Peggy always makes her toys.
My, they're jolly, sure.

Tea sets out of acorn cups,
Apple seeds for mice,
Wrinkled nuts for dollies' heads,
Round, and hard, and nice.

Flower girls with poppy skirts
Ready for a ball,
Burdock men, and pumpkin carts,
Peggy makes them all.

Peggy's dress is old and torn,
Peggy doesn't care,
All the woods are full, she says,
Of pretty things to wear.

Down her ragged gown she hangs
Trailing, golden leaves,
For her throat, a necklace green
Of grasses Peggy weaves.

On her tangled, yellow curls
Peggy twines a crown,
Barberries like rubies red
Set in russet brown.

Peggy's house is very small,
Just two rooms all told;
Peggy has another house,
Big, and wide, and old.

Velvet moss the carpet is,
Roof of azure sky,
Painted on the spreading walls,
Flowers and sunsets lie.

Field and forest are the rooms,
Full of treasure stores,
Peggy's just the gardener's child,
Owns the whole outdoors.
—Little Folks.

Little Beavers' Letter Box.

Dear Puck and Beavers,—I used to be a silent reader of "The Farmer's Advocate" ever since I could read. I am very much interested in the Beaver Circle. My father has taken "The Farmer's Advocate" for twelve years, and he wouldn't do without it.

I live on a farm situated on the Grand River, where the men go fishing in the spring. Last spring they used to go in

the evening for cat fish. One time they caught forty fish,—thirty-eight cat fish. I go to school nearly every day if I am not sick. I had the jaundice last spring right after Easter holidays. I must tell about my pets. We have five little kitties that haven't their eyes open yet, and a dog eight months old. He is so playful; he takes a hold of a stick or strap at one end, then we take a hold at the other end and run around in the yard. If we have a strap I take hold right near his head, then he keeps step with me.

I go to Sunday school and church every Sunday. My father is Supt. of the Sunday School. I am very much interested in birds, animals and flowers.

Hoping this will escape the w.-p. b., I will bring my letter to a close, as it is getting rather long. I wish some of the Beavers of my age would correspond with me. Wishing the Circle great success.

OLIVE ZELLER
(Age 12, Book Jr. III.)
Breslau, Ont.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle. I go to school every day. I like to read the Beaver Circle. At Christmas time I like to get up and see what old Santa Claus has brought me. I got a nice doll last Christmas. I call my doll Violet Brown. I was 8 years old the 19th of May. I am in the Second Class. I like summer holidays. We have a little wagon, and we ride Arnold in it. My sister and I worked to get the money for it.

NORA BROWN (Age 8).

Dear Puck and Beavers,—This is my first letter to the Beaver Circle, although my father has taken it for a number of years and likes it fine. I have one sister; her name is Rosetta, and six brothers. I like kittens; we have six little ones. We live on a farm a mile and a quarter from school, right beside Mud Lake, but I never had a boat ride this summer. We have a little colt about a month old; we call it Beauty. I guess I will close, as my letter is getting long. Wishing the Circle every success.

CLARA WILSON
(Age 11, Book III.)
Dalrymple, Ont.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle. My father has taken "The Farmer's Advocate" for a number of years. I like reading the Beaver Circle fine. I have a brother named Joshua. For pets I have a dog named Riel, one mother cat and one kitten. The mother is called Tiny; the kitten is called Ginger. I have six dolls; their names are Alice, Daisy, Myrtle, Silva, Lotta, Topsy. I like playing with my dolls. I am 10 years old. I go to school; I am in the Third Class at school. We are about two miles from the Town of Mitchell and two miles from school. Good-bye.

Mitchell, Ont. MARTHA MITCHELL.

Dear Puck and Beavers,—This is my second letter to the Beaver Circle, and I like to read them, and thought I would have to join in, as I get lonely when I don't see my letter in the children's page. I have not much to say, but will tell what pets I have. I have a dog named Collie, two rabbits named Dick and Floss, and two kittens Kix and Kax.

I will ask you some riddles: When was beef the highest? When does a crow sit on a stump? When a cat falls down from a tree what makes her land on her feet?

I must close now, hoping the Beaver Circle very good success.

MANNTON HOWLING
(Age 12, Book III.)
New Dundee, Ont.

You did not say whether you are in Senior or Junior Third Class, Mannton. All letters marked simply Book III, are put in Junior Beavers.

CONTRIBUTORS.
What letters of the alphabet are most like a Roman emperor? The C's are.
Why is a stone like Niagara? Because it's a catfish.

"The Farmer's Advocate" Fashions.



7082 Fancy Blouse, 34 to 42 bust. 7086 One-Piece Waist, 34 to 42 bust.



7076 Three - Piece Skirt, 22 to 32 waist. 7085 Girl's Square Yoke Night-Gown, 2 to 12 years.



7075 Semi - Princesse Dress for Misses and Small Women, 14, 16 and 18 years. 7071 Kimono with Yoke for Misses and Small Women, 14, 16 and 18 years.



7070 Plain Shirt Waist, 34 to 44 bust. 7077 One-Piece Blouse, 34 to 42 bust.

Please order by number, giving age or measurement, as required, and allowing at least ten days to receive pattern. Price, ten cents per pattern. Address, Fashion Dept., "The Farmer's Advocate," London, Ont.

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.]

Place Names.

The other day I chanced to read a news item in one of the dailies concerning Wychwood and Bracondale. "Wychwood" and "Bracondale"; I have not been to either place. Perhaps if I had been, Pottsville and Boggstown might seem more appropriate, but with the imagination still at liberty to rove, I could appreciate to the full the charm the mere words carried. Wychwood and Bracondale certainly seemed good places to live in or to visit at, and I began to wonder why more care is not ordinarily exercised in the naming of places, or why such places as have been badly named are not, in the interests of euphony and advertisement, re-christened.

Taking up a Post-office Guide, I began to run over the names of the post offices and counties of Canada.

Here were places named after great men,—a good idea, with a trend towards keeping history alive, Bagot, Champlain, Laval, Frontenac, Sydenham, Simcoe, Strathcona,—no one can object to such names as these. . . . But what a weary round has been rung on that historic and melodious old suffix, "ville." What Petervilles and Maryvilles, and Brownsvilles, and every other kind of viles it has been responsible for! Variety is the spice of life, and yet no doubt for generations in the future as in the past, the old Norman terminal must still keep on its untiring way.

Lack of originality also has hugged to its heart a variety of descriptives, among which "corners," "mills," and "crossings" have done more than double duty. "Black's Crossing," "Hopper's Mills," and "Stokes' Corners,"—who would welcome a call to live at any one of them?—and yet these places "on sight" might be dreams of Elysian peace or picturesque beauty.

Frankly, however, I should prefer a summons to any of these places rather than to Bethel, Zion, Bethany, Mount Carmel or Mount Horeb. Fancy the shock on first meeting a load of turnips en route up the street of Zion, or still worse a load of porkers with stark and rigid legs turned ghastly skyward! And fancy a common, ordinary sinner being obliged to spend his days in the vicinity of Mount Horeb!

Go on down the list:—Cadwallader, interestingly reminiscent of George Eliot,—how did it get its name anyway? . . . Then a fine list "called for" old-world men or places, names not quite Canadian enough, perhaps, to be wholly satisfying, yet justifiable, if only by reason of their euphony,—Castlereagh, Windermere, Glangary, Athol, Ayr, Erin, Balmoral, and Ballycroy of verdant memory. . . . Look at these, too, for pure melody of soft vowels and liquids,—Avonmore, Detouraine, Orillia, and Iowalta, Lodora, too, with its rippling suggestion of "How does the water come down at Lodora?" and Melrose, carrying one to "If thou would'st view fair Melrose aright, Go visit it by the pale moonlight."

Derby, good name, good sport, half pleases you, then you come down with a bump. Cut Bank, Flee Island (one wonders if it were ever "Flea"), Jumping Pond and Ratter's Corners,—these are bad enough, but there is at least some suggestion of life about them. Not so with Gas Line, Dead Creek and Lost River. For suggestion of dead monotony, can anything be worse? And yet extremity of desperation has not yet been reached. Here it surely is, at least somewhere here,—Folly Lake, Last Chance, Hoodoo, and Go Home!

There is hope, however, on this mortal earth. Go to Simcoe Co., Ont., and you will find, proudly proclaimed Utopia. If that will not suit you, possibly you may find satisfaction in Nova Scotia, where still exists the "Garden of Eden."

Surely names were at a discount when no better adjective than "burnt" could be devised to describe so many places.—Burnt Church, Burnt Coat (whatever tale may hang thereon), Burnt Land, even Burnt River, and Burnt Lake.

Lancelot isn't so bad, carrying one back to the dashing Arthurian knight,—but what sort of effeminate peoples such places as Alice, Ida, Elizabeth, Mattie, Rosa, Menie, Mina (but not "Mo")? And what epicurean propensities prompted such banalities as Apple Hill and Cherry Hill, or, whisper it low, Brandy Creek,—and that in the heart of "Egypt"? Then, what on earth kind of people live at "Black Donald," and at "Canard"?

"Seven Persons,"—surely the namer of that place had reached desperation like the surveyor who got tangled up in the lakes of Northern Ontario. For a time, he found light in the ornithological world, as "Gull Lake," "Loon Lake," "Bittern Lake," etc., bore witness. That exhausted, he named the next "This Man's Lake," the next after that, "That Man's Lake," and, finally, one more, "No Man's Lake."

Here is something better,—enthusiastic Canadians may be pardoned for having dubbed embryo towns Ladysmith and Majuba Hill. . . . British Columbia, too, has fixed upon some unsettling cognomens—Lillooet, Chilliwack, and the like,—one wonders what they mean. They are at least characteristic.

What a blessing it is that Rat Portage has been changed to Kenora, Kenora, full of music. Medina is musical too, but one wonders if one should go there with a little praying mat and a little song about "Allah il Allah."

Fairy Hill and Fern Glen,—imaginative and beauty-loving souls must have named these. Surely Fairy Hill and Fern Glen should have been in juxtaposition, but the one is in Assiniboia and the other in Muskoka.

The French names of the lower Province sound, to English ears, at least, musical, and look picturesque. Charlevoix, Becancour, Vaudreuil and Beauharnois, are a sample. Bon Conseil—this sounds interesting,—and surely Bon Desir. Then Chicoutimi and Cocococatche—surely these set the fancy a-rolling. . . . The Eastern Provinces have also many euphonic names to their credit: Benacadie, and Bras d'Or, and Blomidon, and Gasperoux and Pomarderie, with many of the old Indian names that have been carried down, especially in New Brunswick.

Speaking of Indian names,—surely it is a pity that we have let so many of them drop. The most interesting history of our country is bound with the Indians, as you must realize if you read Parkman. Then, the Indian names are purely American—different from any that can be found elsewhere under the sun. Last, but not least, they are so very often music in speech, sweet, woodsy music, suggestive of pines and waterfalls and rapids and hidden trout streams; Kee-waydin and Temagami, Tehkummah and Phimweseeep, Magnetawan and Paspebiac, Abenakis, Ahoussat and Allumette; no wonder that Thorau loved to weave them into his stories of the Maine Woods, or that even the mention of one of them in February was enough to set Stuart Edward White a-packing,—the call of the "red gods," leading him straightway to the Aromatic Shop, and to the deep, dark forests beyond which were to be to him home and liberty for a whole summer long. Our woods, Canadian woods; it was, by the way, that first inspired him.

Chatterers, this is a long ramble, but perhaps some of you may have something to do with the naming of a place some day, and this may have set you thinking. D. D.

Recipes in Season.

Scalloped Potatoes with Cheese.—Slice raw or cooked potatoes, and put in layers in a baking dish, covering each layer with salt, pepper, a very light dredging of flour, a few dots of butter, and some grated cheese. Cover the potatoes with milk, cover closely and bake until tender; then take off the cover, sprinkle grated cheese over the top, and place in the upper part of the oven to become a nice golden tint. Serve for tea without meat.

Orange Apple Sauce.—Pare, core, and cut into quarters 1 lb. apples. Put $\frac{1}{2}$ lb. sugar and $\frac{1}{2}$ pint water on to boil. Add grated rind of one orange, boil a moment

longer until slightly syrup-like, then add bowl; rub shortening in with tips of the fingers; sift in the baking powder and mix well. Mix quickly to a soft dough with the milk, using a broad-bladed, flexible knife. Flour the board lightly, turn the dough out, and roll it round to coat it with flour. Knead just enough to make the dough smooth. Roll out 1 inch thick, and cut into small biscuits. Wet tops only with milk or water, and bake in a hot oven about 20 minutes.

Spiced Apples.—Cut nice sweet apples in halves without paring. Take out the core and stick three cloves into each half. Lay them in a greased baking dish. Sprinkle sugar and grated nutmeg over them, and dots of butter, and just a little water. Bake in a hot oven about 30 minutes. A little vinegar may be added if liked.

Beef Kidney.—Cut one beef kidney into small bits. Cook half an hour in salted water. When tender, pour off the water. To the kidney add one small onion chopped fine, a leaf or two of sage, one large cup water. Bring this to a brisk boil, add a pinch of salt, thicken slightly with flour or cornstarch, and just before serving add two hard-boiled eggs, chopped coarsely. Serve with or without toast.

Quaker Oats Blanc Mange.—Bring one quart sweet milk to a boil, salt slightly, and thicken with quaker oats porridge. Let boil up. Remove from the fire, and stir in two very well beaten eggs. Serve hot or cold, with cream and sugar.

Bread Omelet.—Crumble one cup stale bread crumbs and soak them in half a cup milk. Then beat them quite smooth and add a pinch salt and three beaten eggs. Butter a shallow pudding dish well, pour in the mixture and bake about ten minutes. Serve at once in the same dish, as it falls if left stand.

Bean Puree.—Place two tablespoons each of butter and flour in a saucepan over the fire, stir them until brown, then add one cup baked or boiled beans and three pints boiling water. Season with salt and pepper and celery or onion chopped fine. When the beans are very soft, press them through a colander or ricer into the liquid again. Let boil up once, and serve with half-inch dice of bread fried in enough hot butter to brown them.

Canning Corn.—Cut the raw corn off the ears, pack closely in sterilized sealers. Add a little salted water and boil three hours in a closed vessel, then seal and put when cool in a dark place. Both tops and rims should be sterilized.

Dried Corn.—Cut the grains from young corn, put one layer deep in granite pie-pans, and dry in a hot oven, taking care that it does not scorch. Put in cheese-cloth bags and hang in a dry, warm place, so that it cannot grow musty. Cook as you would fresh corn, without soaking.

Rolls.— $\frac{1}{4}$ cups milk, $\frac{1}{2}$ cup water, 1 cake compressed yeast, 2 level teaspoons salt, 2 level tablespoons sugar, 2 level tablespoons butter, 1 level tablespoon lard, flour to mix. Put the yeast cake and 1 tablespoon sugar in a cup; add $\frac{1}{2}$ cup of the water warmed to 90 degrees F.; mix until smooth and the sugar is dissolved, and stand in a temperature of 80 degrees F. for 20 minutes. Put the milk on to scald. Measure the butter, lard, salt, and the rest of the sugar into a kneading-pan, pour in the scalding milk, add the remaining $\frac{1}{2}$ cup of cold water, and allow it to come to 90 degrees F. Add enough flour to make a batter that will not spatter when beaten, stir in the fermenting yeast, and beat until it looks smooth and elastic. Mix in enough more flour to make a dough that will not stick to the hands. Turn out on the board and knead until smooth and velvety. Return to the warm, greased bread-tin, cover closely, and keep at 80 degrees F. until nearly tripled in volume. Knead down in the pan and let rise to 80 degrees F. until double in volume. Shake into small rolls, put into greased pans, and stand in a temperature of 80 degrees F. until doubled in volume. Take care that the surface does not dry. If not possible to keep them covered closely, moisten the top occasionally with warm milk or water. Bake in an oven a little hotter than used for bread for from 20 to 35 minutes, depending on size of the rolls. The oven must not be too hot at first. Cool quickly.—[From Prof. Harcourt's Bulletin on Flour and Bread-making.]

Baking Powder Biscuits (Macdonald Institute).—Four level cups flour, 1 level teaspoon salt, 2 level tablespoons shortening, 2 $\frac{1}{2}$ level table-spoons baking powder, about $\frac{1}{4}$ cups milk. The shortening may be lard, or dripping, or butter, or a mixture. Sift salt and flour into a

longer until slightly syrup-like, then add bowl; rub shortening in with tips of the fingers; sift in the baking powder and mix well. Mix quickly to a soft dough with the milk, using a broad-bladed, flexible knife. Flour the board lightly, turn the dough out, and roll it round to coat it with flour. Knead just enough to make the dough smooth. Roll out 1 inch thick, and cut into small biscuits. Wet tops only with milk or water, and bake in a hot oven about 20 minutes.

For Pickling Time.

Rajan Pickle.—Six quarts green tomatoes, sliced; 1 small head cabbage, cut fine; 3 onions, sliced; $\frac{1}{2}$ cup salt, $\frac{1}{2}$ cup sugar, 1 small cup mustard seed, 1 small cup celery seed, 1 tablespoon whole allspice, 1 of whole pepper, $\frac{1}{2}$ tablespoon whole cloves, 1 tablespoon whole stick cinnamon, broken in bits; good cider vinegar to cover. Put alternate layers of tomatoes and cabbage, with a sprinkling of the onions, sugar, salt, and seed over each layer, in a kettle. Cover with the vinegar, and let simmer until tender. When nearly done, add the spices.

Chow-chow.—One green pepper, 4 quarts green tomatoes, 6 small onions, 1 head celery, 1 pint peeled and chopped cucumbers, 1 cup sugar, 1 saltspoon (heaped) ground cinnamon, and 1 of allspice, 1 tablespoon (scant) mustard, $\frac{1}{2}$ cup salt, 1 quart vinegar. Chop the tomatoes and mix the salt with them. Next morning drain well. Add the other ingredients and simmer for 6 hours. Pack in stone or glass jars, and use a granite or wooden spoon while stirring.

Spiced Apples.—To six tart apples use one cup white sugar and three cloves. Boil gently until the fruit is cooked. You may add to this one stick cinnamon and one blade mace if you like.

Cantaloupe or Musk Melon Pickles.—Make this in September. Pare the melons and take out the seeds. Cut into strips. To 7 lbs. allow 3 lbs. sugar and 1 pint white wine vinegar. Boil the sugar and vinegar together, adding a few sticks cinnamon and a few cloves. Put in the melon and simmer a long time until it looks quite clear.

Mixed Pickles.—One gallon cucumbers, cut small; 1 gallon green tomatoes, quartered; $\frac{1}{2}$ gallon onions, steamed; 2 heads cauliflower, steamed; 6 green peppers. Scald in brine and let stand a day or two, then drain and mix with the following dressing: One gallon cider vinegar, 12 tablespoons mustard, 2 cups sugar, 2 tablespoons turmeric powder, 1 large cup flour wet with a little cold vinegar. Put all into the boiling vinegar, let boil 5 minutes, then mix with the thoroughly-drained pickles. If you like, you may add steamed green beans or chopped celery to the pickle.

Another for Mixed Pickles.—One peck green tomatoes, 10 onions, 10 green peppers. Chop together, add 1 cup salt and let stand over night, then drain dry. Put in a kettle with 1 lb. brown sugar, $\frac{1}{2}$ cup grated horse-radish, 1 tablespoon each black pepper and mustard, whole white mustard seed, and celery seed. Cover with vinegar, and boil gently for one hour.

Wander-Song.

By Martha Haskell Clark.

The gray friar loves his book and bell,
The king, his golden crown;
The archer, his October ale
That sparkles bright and brown;
But search the green earth far and wide,
There's naught so dear to me
As the little grassy wander-roads
That lead beside the sea.

They gave me wine unto my lips,
And gold within my hands,
And filled my garners high with grain
As pittance of my lands;
But naught I own—nor land nor gold
Cries half so sweet to me
As my little grassy wander-roads,
A-calling by the sea.

I stole myself a gipsy cloak,
And wandered o'er the downs,
And found myself a sea-sweet nook
Afar from clustered towns;
For of all the great world's treasure-
store,
The dearest things to me
Are my little grassy wander-roads
That litter by the sea!

The Farm is the Place for You.

A young man applied for a position to a commission firm in the Live-stock Exchange building, says the Christian Endeavor World.

"I want a job. I am a first-class stenographer and bookkeeper."

The head of the firm looked at him for a minute.

"Where do you come from?" he asked.

"I live in Central Kansas. My father is a farmer, and owns a big ranch."

"How much do you expect a week?"

"Well, I think I ought to be worth twelve dollars a week."

"Does your father need help at home?"

The applicant admitted that his father needed hired help.

"Young man," said the live-stock man, "the farm is the place for you. At first you would scarcely make enough here to pay your board. At home your father would be willing to pay you good wages, and that would be clear profit."

The boy looked at the floor. "I guess you're right," he admitted. "I'll go home to-night."

Many another farmer's son who is uneasy and ambitious for a life in the city should cut this out and paste it in his hat.

As I visit the great cities, I wonder how anyone of his own free will can live in one of them.

Many of us have to, to be sure. Our work lies in the city, and we have to go to the daily treadmill; and the most we can hope for is a quiet home in the suburbs where we may spend our nights and Sundays, and perhaps a little farm where we may end our days when life's more strenuous work is over.

But the country, with its innumerable charms, its growing things, its animal life, its freedom, its good air, its sunshine, its glorious, howling storms, its pattering rain in summer, its untrodden, unpolluted snow in winter—how can one ever leave it voluntarily for the city with its smoke and dust, its noise and clamor, its struggle and strife, its jealousies and intrigues, its saloons and its brothels?

I thank God for the brave souls who are willing to tackle the city's problems, and try to purify its social and political atmosphere, and am sorry for the poor souls who have to live in the city because they can't get away from it. But for the man who has a country home, or can have one, and who voluntarily leaves it—well, I simply wonder at his mental make-up.

I know what there is to be said on the other side; but the telephone and the trolley, the magazine and the newspaper, are largely eliminating the isolation and loneliness of country life, and are promoting that wholesomest of cries: "Back to the farm!"—Onward.

Lipton's First Job.

Long before the days of Lipton's Tea and the successive Shamrocks, a poor boy of sixteen left his native shores and took passage for America, the land of opportunity. Sir Thomas Lipton tells in his reminiscences in The Strand Magazine how he first secured employment in New York. We read:

I had not dared tell my father and mother, so they only knew of the great step I had taken when I had gone. Had it not been for the kindness of my fellow-passengers my journey would have been very miserable, and once or twice, I confess, I lost heart. I had no money nor any one to go to when I arrived in New York, and before we landed I cudgelled my brains as to what I was to do. As the steamer drew alongside the pier I took up my few belongings and rushed away to the nearest hotel before any one else had left the vessel. As it seemed a clean, well-kept place, I asked to see the proprietor, and told him that I could get him forty patrons, provided he would board and lodge me for a month. To this he consented. I made my way back instantly to the boat, and was just in time to catch my fellow-passengers and persuade them to go to this hotel, where I assured them they would get excellent accommodation. And they did.

The feeling of friendship is like that of being comfortably filled with roast beef; of love, like being enlivened with champagne.—Dr. Johnson.

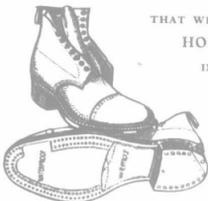
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PLEASE MENTION THE ADVOCATE.

The Awakening of Ezra.

By W. S. Jennings, in Farm and Fireside

Ezra was replanting corn. He had been at this task ever since the young shoots had gotten through the ground far enough to show where they were and where they weren't, and that had been for an age, or at least it seemed so to Ezra. He had begun on this field with the hoe when the hired man began with the corn-plow, and so long as he could keep up and follow along behind, all went joyfully; but when the sun got higher in the sky and became hotter, the clods began to get hard, and Ezra stopped often to rest his bare feet. Thus he fell behind; at first it was only a few yards; then he lost an entire row, then two rows, and so on, until now the hired man was away down at the lower end of the field where the ground was wet and the weeds were thick, and the boy was all alone. The short hoe grew very heavy and the bag of corn which hung at his side was by no means light. The sun beat down on the big straw hat and shimmered up from the hard, white clods in little undulations of heat that parched and burned, until it seemed that the whole landscape was aglow.

EZRA BEGINS TO LOSE INTEREST.

Altogether, replanting corn was getting to be a very distasteful occupation for Ezra. Everywhere that a hill of corn was missing, a cutworm had been at work. Ezra thought that there must be an army of cutworms at work in this particular field. At every such place he must dig a hole, drop in five grains, cover it up and pat it down with the hoe; a long process for a boy who liked to have things over with quickly. The hoe made more infrequent and desultory attempts upon the hard earth. The bare feet trod more gingerly. The pair of brownie overalls that enveloped Ezra's small form seemed to have a tendency to move very slowly, indeed.

After all, what was the use? Down in the new ground, by the woods, the crows were excitedly cawing and flying about, all noisily trying to talk at once, for all the world like the women who came to help his mother at threshing-time. Ezra knew that as soon as the hired man drove out of the corn-field the crows would come down to dinner, and there would be a lively scratching and pulling up of young corn, and then—more replanting. Altogether, life began to take on a most serious aspect for Ezra, and being at the end of a row, he sat down again to think it over.

Ezra, being young, had never heard of the saying, "he who hesitates is lost," or perhaps he would never have hesitated, and I would have had no story to tell. At any rate, he hesitated to think it over, and, while he was thinking, down the road in a cloud of dust came the Tempter. To be sure, he came, not in a fearful form for a Tempter, but he was a Tempter just the same. There were two of him, and each one wore brownie overalls and a straw hat and blue-and-white-checked shirt, and kicked up clouds of dust with bare toes turned carefully upward to avoid hidden stones. Not a fearful form at all, but the Tempter himself knows best what form catches small boys.

THE TEMPTER SENT AWAY.

Ezra, seeing the cloud of dust, recognized at once what was in it. So he climbed to the top rail of the fence, where he sat astride and waited. "Hullo, fellers," he said, as the two stopped before him.

"Hello, Ez, what you doin'? Replantin' corn?"

"'Naw, ridin' my airyplane; want to get on?"

The Tempter vouchsafed no retort, nor ventured to mount the unknown steed, but continued: "We're goin' over to Blue Hole. It's too nice to work. Better come on."

"Humph-umph," was Ezra's unpromising reply.

"'Fraid you'll get a lickin' if you go along with us?"

"None."

"Then why don't you go?" persisted the Tempter.

"Would if I wanted to," said Ezra.

"Don't want to?"

"'Fraid cat, 'fraid cat," sang the Tempter, and passed on down the road.

Ezra sat astride the rail as if that were his sole purpose in life until the

Tempter was out of sight. Then he slid slowly to the ground and picked up his hoe and corn. He started to work with renewed determination. But the Tempter's work had been well done. Ezra's determination dwindled rapidly until he hesitated again, and, hesitating, was lost.

He looked carefully about. The hired man was not to be seen. No one would ever know. Boiling sun, crowds of crows, hard clods, all forced themselves upon his consciousness and added their efforts to the taunts of the Tempter to make him desert his post. Being human and only a boy, he yielded.

With sudden and awful resolution, and with a terribly beating heart, he took corn and hoe and climbed over the fence into the road. On the other side of the road was a line of post-holes where the hired man had been at work in wet weather, preparing to build a new wire fence. Ezra found a particularly deep hole, and here a whole bag of corn was planted, all at once. He covered it with earth and rolled in a big stone to prevent inquisitive chipmunks from revealing his secret.

Now, Ezra felt, he had obeyed in letter, if not in spirit, the paternal law, which had been laid down at the breakfast-table thus: "When you get that bag of corn planted, you can go swimming, and not before. But don't you put more than five grains in a hill."

Ezra was quite sure that he had obeyed the law, for nobody ever heard of calling a post-hole a hill, and nothing whatever had been said about post-holes. People much older and wiser than Ezra have been known to quiet their consciences in much the same way as this.

SWIMMING AT BLUE HOLE.

Down at Blue Hole a big sycamore leaned far out, shading the pool. That was why it was such a good swimming-hole. You didn't get your back sunburned in Blue Hole. The small boys who were splashing noisily there suddenly knew that someone was arriving. A long yell announced his coming, and, looking up, they beheld Ezra crossing, at a run, the wide patch of bluegrass that bordered the creek. He wore a look of supreme happiness, and—that was all. The hat, shirt and overalls were in his hand. Ezra was economical of his time—at times; besides, a boy who couldn't undress on the run didn't have any business to be swimming with Ezra's bunch. Flinging his clothes in the air, he ran right out on the big sycamore with his own war-whoop (every boy has his own), and pausing only to balance a moment, and to utter the prelude of every dive, "Here goes nothin' after sunthin'; look out, fellers," he dived with sprawling limbs into the pool.

Everybody had to go to church and Sabbath school on Sunday afternoons. Everybody, that is, excepting the hired man. On this particular Sunday afternoon the hired man strolled out to view his work on the new fence while the folks were away. But Ezra sat in the pew between his father and mother, and, as usual, prepared to go to sleep.

To-day, however, he was destined not to go to sleep. The very first words of the preacher, after he had wiped his spectacles and opened his big Bible, caught the boy's attention and made him very wide awake, indeed. After announcing the chapter and verse, the preacher read with great emphasis, "But if ye will not do so, behold ye have sinned against the Lord; and be sure your sin will find you out." And then, removing his glasses and looking slowly over the audience until his eyes fell exactly on little Ezra, or at least Ezra was sure they did, he repeated slowly, "Be sure your sin will find you out."

EZRA IS CONSCIENCE-STRICKEN.

At first Ezra was very much frightened. He glanced about involuntarily for the sheriff, a personage whom Ezra had always connected inseparably with sin, and of whom he was terribly afraid. But the preacher went on talking, and Ezra went on listening. He looked out of the window. He made a face at the baby on the seat in front, but he could not help hearing every word that the preacher said. Always, he had the guilty consciousness of that bag of corn, hidden away in the post-hole. The bag which everybody thought he had carefully planted. He had thought of that mat-

ter as ended, but "Be sure your sin will find you out" the man had said. It made Ezra terribly uncomfortable as he wondered what people would say when they found him out. Finally the preacher said, "And lastly, Beloved," and closed the Bible. Ezra heaved a sigh of relief. An awfully big sigh for so small a boy.

A HAIR-RAISING STORY.

But the worst was yet to come, for, by way of proving finally and without question that your sin will find you out, the preacher began to tell a story. A story of a murderer who hid the body of his victim under a great pile of leaves, and the wind blew and blew, and blew the leaves all away. Ezra listened with open mouth and big, fear-stricken eyes. And when the murderer took the body again and sunk it in the river, and the river dried up, he shuddered and moistened his lips. And then when the murderer took the body again and hid it under a big pile of stones, and an earthquake came and tore them away, the boy gazed in horrid fascination at the preacher, but cast guilty glances from side to side at his parents. No one in that audience knew so well as Ezra just what agony of remorse that murderer experienced, although the preacher's description was as vivid as old-fashioned theology could produce.

When the service was over, the preacher did not shake Ezra's hand at the door as was his custom, for the boy had slipped out at the side door, braving his parents' displeasure. He knew he could never face that accusing look. He would drop dead if he had to do that. And so he ran down the road to his home as fast as his short legs could carry him, which was very fast, indeed.

MAKING THINGS RIGHT.

When the moon is shining real bright, you can distinguish young shoots of corn in the field if you try. That is, you can make a very good guess as to where they are and where they aren't. The big stumps made fearful shadows, and a screech-owl in the deadening, made the most doleful and ghostly noises. And in Ezra's excited imagination every stump hid a murderer, and every screech of the owl was the wail of a dying soul. But Ezra's determination was great when aroused, and he was determined to atone for his sin before it was found out, even if he was murdered in the attempt. It had taken some terribly hard digging to get that stone out of the post-hole, and as Ezra went with feverish haste up and down the long, moonlit rows of corn, he dropped perspiration with every grain, until the last grain was planted.

Never before had he been out as late as eleven o'clock at night, and so he did not know that the hired man smoked his pipe on the back porch at that hour. As he slipped quietly up the steps in order to waken no one, he ran plump into that individual.

"'Purty big stone in that hole, sonny; how'd ye ever get it out?" inquired the hired man with a grin.

"'Dug it out," said Ezra shortly, and passed on up to bed.

The Old Lover.

Been her husband forty years;
Didn't think I'd mind at all,
When she went away to Mary,
Just to see the baby small,
Knew, of course, that I would miss her,
Never thought that I would be
Just a hungerin' to see her,
Wishin' she'd come back to me.

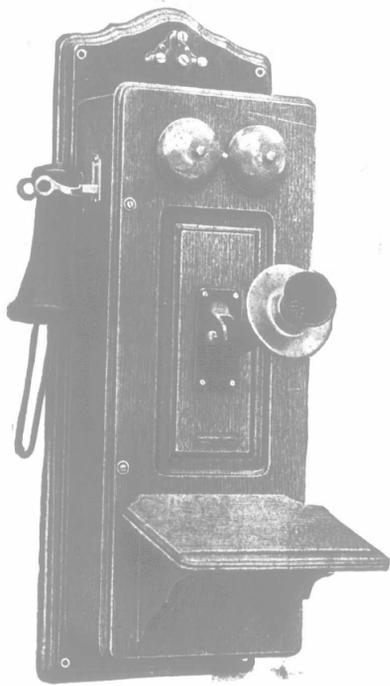
'Tain't because I'm old an' foolish
That I'm achin' in this way;
Just can't get along without her,
Yearnin' for her every day.
Things don't go the way they used to,
Nancy's gone an' life's a sham;
I'm just achin' now to see her,
Lonely? Well, I guess I am.

Want to put arms about her,
Want to smooth her silvered hair,
In my throat a lump's arisin'
When I see her empty chair.

This old house, so still and solemn,
Isn't what it used to be;
This old heart of mine's not, either,
Nancy's gone away from me.

Gone to see our daughter Mary
An' her baby. When she went
Said she'd come back just the minute
That I wanted her, and sent

For her; Nancy, I'm a writing,
Come back right away, oh, do;
For the old man's, oh, so lonely,
An' he's yearnin' just for you.



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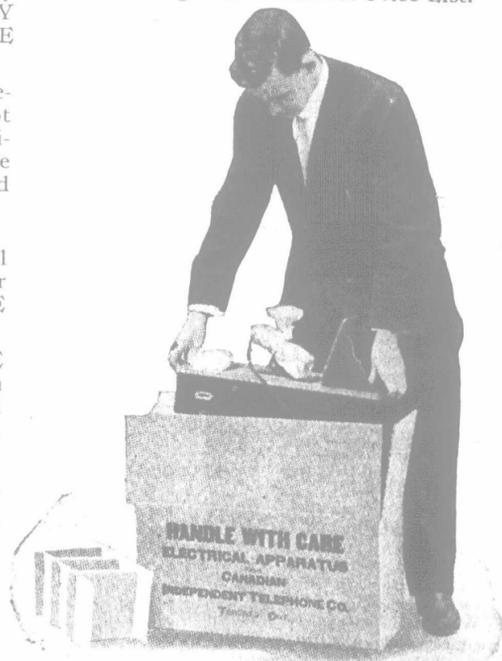
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Intensive Observation.

By John Burroughs, in *Country Life in America*.

The casual glances or the admiring glances that we cast upon nature do not go very far in making us acquainted with her real ways. Only long and close scrutiny can reveal these to us. The look of appreciation is not enough; the eye must become critical and analytical if we would know the exact truth.

Close scrutiny of an object in nature will nearly always yield some significant fact that our admiring gaze did not take in. I learned a new fact about the teazel the other day by scrutinizing it more closely than I had ever before done; I discovered that the wave of bloom begins in the middle of the head and spreads both ways, up and down, whereas in all other plants known to me with flowering heads or spikes, the wave of

bloom begins at the bottom and creeps upward like a flame. In vervain, in blue weed, in eremurus, in Venus' looking-glass, in the mullein, in the evening primrose, and others, the bloom creeps slowly upward from the bottom. In fact I recall no other plant whose bloom is in a head or in a spike that does not open the bottom florets first and the top ones last.

But with the teazel the flame of bloom is first kindled in the middle; to-day you see the head with this purple zone or girdle about it, and in a day or two you see two purple girdles with an open space between them, and these move, the one up and the other down, till the head stands with a purple base and a purple crown with a broad space of neutral green between them.

This is a sample of the small but significant facts in nature that interest me—exceptional facts that show how nature at times breaks away from a fixed

habit, a beaten path, so to speak, and tries a new course. She does this in animal life too.

Huxley mentions a curious exception to the general plan of the circulation of the blood. In all animals that have a circulation the blood takes one definite and invariable direction, except in the case of one class of marine animals, called ascidians; in them the heart, after beating a certain number of times, stops and begins to beat the opposite way, so as to reverse the current; then in a moment or two it changes again and drives the blood in the other direction.

All things are possible with nature, and these unexpected possibilities or departures from the general plan are very interesting. It is interesting to know that any creature can come into being without a father, but with only a grandfather, yet such is the case. The drone in the hive has no father; the eggs of the unfertilized queen produce drones—

that is, in producing males, the male is dispensed with. It is to produce the neuters or the workers that the service of the male is required. The queen bee is developed from one of these neuter eggs, hence her male offspring have only a grandfather.

The chipmunk is an old friend of my boyhood and my last years also, but by scrutinizing his ways a little more closely than usual the past summer I learned things about this pretty little rodent that I did not before know. I discovered, for instance, that he digs his new hole for his winter quarters in mid-summer.

In my strolls afield or along the road in July I frequently saw a fresh pile of earth upon the grass near a stone fence, or in the orchard, or on the edge of the woods—usually two or three pecks of bright, new earth carefully put down in a pile upon the ground without any clew visible as to where it probably came

from. But a search in the grass or leaves usually disclosed its source—a little round hole neatly cut through the turf and leading straight downward. I came upon ten such mounds of earth upon a single farm, and found the hole from which each came, from one to six feet away. In one case, in a meadow recently mowed, I had to explore the stubble with my finger over several square yards of surface before I found the squirrel's hole, so undisturbed was the grass around it; not a grain of soil had the little delver dropped near it, and not the slightest vestige of a path had he made from the tunnel to the dump.

And this feature was noticeable in every case; the hole had been dug several yards under ground and several pecks of fresh earth removed to a distance of some feet without the least speck of soil or the least trace of the workman's footsteps showing near the entrance; such clean, deft workmanship was remarkable. All this half bushel or more of earth the squirrel must have carried out in his cheek pockets, and he must have made hundreds of trips to and fro from his dump to his hole, and yet if he had flown like a bird the turf could not have been freer from the marks of his going and coming; and he had cut down through the turf as one might have done with an auger, without bruising or disturbing in any way the grass about the edges. It was a clean, neat job in every case, so much so that it was hard to believe that the delver did not come up from below and have a back door from whence he carried his soil some yards away.

Indeed, I have heard this theory stated. "Look under the pile of earth," said a friend who was with me and who had observed the work of the pocket-gopher in the West, "and you will find the back door there." But it was not so. I carefully removed four piles of earth and dug away the turf beneath them, and no hole was to be found.

One day we found a pile of earth in a meadow, and near it a hole less than two inches deep, showing where the chipmunk had begun to dig and had struck a stone; then he went a foot or more up the hill and began again; here he soon struck stones as before, then he went still farther up the hill, and this time was successful in penetrating the soil. This was conclusive proof that these round holes are cut from above and not from below, as we often see in the case of the woodchuck hole. The squirrel apparently gnaws through the turf, instead of digging through, and carries away the loosened material in his mouth, never dropping or scattering a grain of it. No home was ever built with less litter, no cleaner door yard from first to last can be found.

The absence of anything like a trail or beaten way from the mound of earth to the hole, or anything suggesting passing feet, I understood better when, later in the season, day after day I saw a chipmunk carrying supplies into his den, which was in the turf by the roadside about ten feet from a stone wall. He covered the distance by a series of short jumps, apparently striking each time upon his toes between the spears of grass, and leaving no marks whatever by which his course could be traced. This was also his manner of leaving the hole, and doubtless it was his manner in carrying away the soil from his tunnel to the dumping pile. He left no sign upon the grass, he disturbed not one spear about the entrance.

There was a mystery about this den by the roadside of which I have just spoken—the pile of earth could not be found; unless the road-maker had removed it, it must have been hidden in or beneath the stone wall.

And there was a mystery about some of the other holes that was absolutely baffling to me. In at least three mounds of fresh earth I found freshly dug stones that I could not by any manipulation get back into the hole out of which they seemed to have come. They were all covered with fresh earth, and were in the pile of soil with many other smaller stones. In one case a stone 2 inches long, 1½ inches broad, and ½ inch thick was found. In another case a stone of about the same length and breadth, but not so thick, was found, and in neither case could the stone be forced into the hole. In still another case the entrance to the den was completely framed by the smaller roots of a beech tree, and in the little mound

of earth near it were two stones that could only be gotten back into the hole by springing one of these roots, which required considerable force to do. In two at least of these three cases it was a physical impossibility for the stones to have come out of the hole from whence the mound of earth and the lesser stones evidently came, yet how came they in the pile of earth freshly earth-stained? The squirrel could not have carried them in his cheek pouches, they were so large; how then did he carry them?

The matter stood thus with me for some weeks; I was up against a little problem in natural history that I could not solve. Late in November I visited the scene of the squirrel holes again, and at last got the key to the mystery: the cunning little delver cuts a groove in one side of the hole just large enough to let the stone through, then packs it full of soil again.

When I made my November visit it had been snowing and raining and freezing and thawing, and the top of the ground was getting soft. A red squirrel had visited the hole in the orchard where two of the largest stones were found in the pile of earth, and had apparently tried to force his way into the chipmunk's den. In doing so he had loosened the earth in the groove, softened by the rains, and it had dropped out. The groove was large enough for me to lay my finger in and just adequate to admit the stones into the hole. This, then, was the way the little engineer solved the problem, and I experienced a sense of relief that I had solved mine.

I visited the second hole where the large stone was in the pile of earth, and found that the same thing had happened there. A red squirrel, bent on plunder, had been trying to break in, and had removed the soil in the groove.

To settle the point as to whether or not the chipmunk has a back door, which in no case had I been able to find, we dug out the one by the roadside, whose mound of earth we could not discover. We followed his tortuous course through the soil three or four feet from the entrance and nearly three feet beneath the surface, where we found him in his chamber, warm in his nest of leaves, but not asleep. He had no back door. He came out (it was a male) as a hand was thrust into his chamber, and the same fearless, strong hand seized him, but did not hurt him. His chamber was spacious enough to hold about four quarts of winter stores and leave him considerable room to stir about in. His supplies consisted of the seeds of the wild buckwheat (*Polygonum dumetorum*) and choke-cherry pits, and formed a very unpromising looking mess. His buckwheat did not seem to have been properly cured, for much of it was mouldy, but it had been carefully cleaned, every kernel of it. There were nearly four quarts of seeds altogether, and over one-half of it was wild buckwheat. I was curious to know approximately the number of these seeds he had gathered and shucked. I first found the number it took to fill a lady's thimble, and then the number of thimbles full it took to fill a cup, and so reached the number in the two quarts, and found that it amounted to the surprising figure of 250,000.

Think of the amount of patient labor required to clean 250,000 of the small seeds of the wild-buckwheat! The grains are hardly one-third the size of those of the cultivated kind, and are jet black when the husk is removed. Probably every seed was husked with those deft little hands and teeth as it was gathered before it went into his cheek pockets, but what a task it must have been!

Poor little hermit, it seemed pathetic to find him facing the coming winter there with such inferior stuff in his granary. Not a nut, not a kernel of corn or wheat. Why he had not availed himself of the oats that grew just over the fence I should like to know. Of course, the wild buckwheat must have been more to his liking. How many hazardous trips along fences and into the bushes his stores represented. The wild creatures all live in as savage a country as did our earliest ancestors, and the enemy of each is lying in wait for it at nearly every turn.

Digging the little fellow out of course brought ruin upon his house, and I think the Muse of Natural History contemplated the scene with many compunctions of conscience—if she has any con-

science—which I am inclined to doubt. But our human hearts prompted us to do all we could to give the provident little creature a fresh start—we put his supplies carefully down beside the stone wall into which he had disappeared on being liberated, and the next day he had carried a large part of them away. He evidently began at once to hustle, and I trust he found or made a new retreat from the winter before it was too late.

I doubt if the chipmunk ever really hibernates; the hibernating animals do not lay up winter stores, but he no doubt indulges in many very long before-dinner and after-dinner naps. It is blackest night there in his den three feet under the ground, and this lasts about four months, or until the premonitions of coming spring reach him in March and call him forth.

I am curious to know if the female chipmunk also digs a den for herself, or takes up with one occupied by the male the previous winter.

One ought to be safe in generalizing upon the habits of chipmunks in digging their holes, after observing ten of them, yet one must go slow even then. Nine of the holes I observed had a pile of earth near them; the tenth hole had no dump that I could find. Then I found four holes with the soil hauled out and piled up about the entrance, precisely after the manner of woodchucks. This was a striking exception to the general habit of the chipmunk in this matter. "Is this the way the female digs her hole," I asked myself, "or is it the work of young chipmunks?"

I have in two cases found holes in the ground on the borders of swamps, occupied by weasels, but the holes were in all outward respects like those made by chipmunks, with no soil near the entrance. The woodchuck makes no attempt to conceal his hole by carrying away the soil; neither does the prairie dog, nor the pocket-gopher. The pile of telltale earth in each case may be seen from afar, but our little squirrel seems to have notions of neatness and concealment that he rarely departs from. The more I study his ways the more I see what a clever and foxy little rodent he is.

Health by Alphabet.

Some calm and collected person reminds us every little while, in the midst of a world of doctors' patients and devotees of health fads, that many of us have, like Liza, "only ourselves to blame" for our troubles. "How do you do it?" we ask hopefully of some ruddy individual known "never to have had a day's sickness" or such amazing record; upon which come dejecting references to ice-cold tubs, or some comfortless kind of meals. Here is something the ordinary woman may have more temptation to adopt, as there seem no such inhuman practices suggested—a "daily health alphabet," compiled by The New Idea:

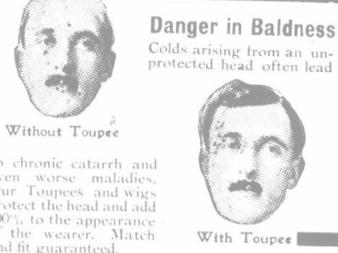
- Abstain from intoxicating liquors.
- Breathe good air.
- Consume no more food than the body requires.
- Drink pure water.
- Exercise daily.
- Find a congenial occupation.
- Give the body frequent baths.
- Have regular habits.
- Insure good digestion by proper mastication.
- Justify right living by living right.
- Keep your head cool and your feet warm.
- Learn to control your passions.
- Make definite hours of sleep.
- Never bolt your food.
- Over-exercise is as bad as under-exercise.
- Preserve an even temperament.
- Question the benefit of too much medicine.
- Remember, "an ounce of prevention is worth a pound of cure."
- Sacrifice money, not health.
- Temperance in all things.
- Under no conditions allow the teeth to decay.
- Vanish superstition.
- Worry not at all.
- X-tend the teachings of this alphabet to others.
- Yield not to discouragement.
- Zealously labor in the cause of health and gain everlasting reward.—Lorquette.



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"I-look here," said the stutterer at the horse fair, "that's a n-n-nice horse, my m-m-man. How much m-money do you want for it?"

"Yes, a beauty that is, sir," said the owner. "But you must make the offer."

"Well," said the stutterer, "I'll give you f-f-f"

"Forty pounds? Done!" said the dealer.

"Good!" closed the stutterer. "I was g-going to say f-f-fifty pounds."

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Aden: A British Port.

By Arthur Stanley Riggs, F. R. G. S., in "Travel" Magazine.

On the road to Mandalay, Where the flyin' fishes play, there is a grim, fire-warped rock towering above the sparkling sapphire of the Arabian Sea—a nolo-rock within which, where the fires of Sheol once flickered and the demons of the underworld belched forth their sticky streams of molten stone, live a handful of puny humans. And at the foot of the peak that was a volcano is a little islet called Sira, where was once the entrance to Sheol the terrible, according to tradition whereof the memory of mankind runneth not to the contrary.

It is Aden, the age-old city of traders who once again populated the spot where before the fall, man-made fable places the Garden of Eden. But Adam sinned; the angel with the flaming sword descended upon the spot; the Creator withdrew his bounty; and the Devil was granted permission to smite the earthly paradise with the red fury of his wrath. Floral beauty turned to the desolation of lava; life and happiness turned to sullen, silent ruin, devoid of life and beauty alike. How long ago that was no one knows, nor how long it remained so. Who saw it first as the meeting-point of East and West? Who first dared encamp upon the red floor of that mighty crater and play go-between with white and black?

Ezekiel tells of "the men of Dedan" who traded to Tyre in the days of her glory, and many another ancient historian has found in its marvellous desolate grandeur an inspiration, while the first Roman Emperor to embrace Christianity, Constantine the Good, found it a city large and important enough to make it worth his while to send in 342 A.D. to establish Christian mission churches among the benighted heathen who formed its purely commercial population. Later, in the Eleventh, Twelfth and Thirteenth Centuries, Aden was still carrying on a trade of vast proportions with Egypt, India and China. Naturally this character made it the coveted prize of every trading nation of the world of that day, and the struggle to hold it involved one after the other—Turk, Arab, Egyptian, Persian, Abyssinian and Portuguese. Indeed, not until England, in 1839, exerted her mighty arm, did the conflict cease, and peace come once more to the peninsula so long troubled. To-day the city is still the point where East meets West, a vast coaling port, a center of cable communication, a mighty fortress for peace.

Aden lies at the extreme end of Arabia, just to the southeast of the Red Sea, and is the most important city of Yemen Province, numbering nearly 20,000 population now. Ancient fortifications, which probably date from about 600 B. C., zig-zag up and down over the foothills of the volcanic crater in the most utterly impossible fashion, guarding the two towns of Aden still to a considerable degree, and bearing upon their scarred faces the marks of many a desperate battle fought in other days between the citizens and the covetous aggressors.

The city itself is double. One part—the one the casual traveller sees—lies on the shore of the harbor at what is called Steamer Point, shadowed by the towering mass of Jeb el Shum-Shum. This settlement is as nondescript as any to be found anywhere in the world—a conglomeration of white men, Somalis with their crinkly black hair artistically done up with mud curls, shorter, more intelligent looking Arabs, villainous half-breeds of unknown seas, and occupations, and the merchant population, busy about its coal yards and trading stations, cable offices and soldiering. Italian salt-makers flank the shimmering harbor with their glittering piles of snowy crystals, Arab boat-builders chip away along the shore at their clumsy-looking buggaloos, or sail lazily to and fro without apparent interest or destination. Tommy Atkins in British red wanders forlornly about, pipe in mouth and swagger-stick in hand, not knowing exactly what to do with himself off duty, and the tourists come ashore for two or three hours from a visiting steamer in for coal, race to the curiosity shops, marvel at the camel and donkey trains of forage and brushwood, chatter about the "awful hole" they find it all to be, and tumble back

on board the Leviathan again, satisfied that they have seen Aden.

But they have seen the least of it only. Leaving the straggling settlement along Steamer Point, and driving in a very rickety barouche pulled by a stocky little Arab, we wind up the snaky road along the outer side of the volcano, past Quarantine Island, on through Hedjuff Pass, and so down into the glaring bottom of the crater where the old white, yellow and faded blue city of Aden radiates waves of heat. Imagine if you can, you who have never been far from a parlor car or a vegetable garden, a spot so desolate that not a green thing grows for even animal food, where there is no rain except at long intervals of years, where the temperature rises almost daily to 130 degrees Fahrenheit in the afternoon, and where the very chickens you eat—when you can get them at all—come from far up in Arabia, or across from Africa, where your grain comes from India, your flour from Trieste, your oranges from Egypt, and your limes from distant Zanzibar! So Aden still carries on an enormous trade. In fact, it is the one city I know of into which every commodity except ostrich feathers must be imported.

The Adenites, however, do not much mind the importations of food. Their greatest difficulty and most precious thing is water—the blessed water that cools the throat parched with the toil of the hands in the blazing, scorching, stupefying sun; the water that alleviates the misery of fever; the water that is necessary for sanitary and domestic uses. When I was in Aden in 1904, there had been no rain for seven years! The barren rock was literally as dry as dust—the hot siroccos swept it up in eddying tumults of pulverized stone that bit the eyes and nostrils. Water there is, of course, supplied by the Government condensers, at so much the gallon.

It is only in comparatively recent times, however, that distilled water has been supplied to the thirsty citizens. Before England took possession of the city in 1839, at the cannon's mouth, the Adenites were hard put for water, as that which flows in ten miles from the Arabian hills through the ancient and now almost ruinous aqueduct, is very brackish and really unfit for drinking, though usable for other purposes. Only seventy miles away, and clearly visible from the top of Mt. Shum-Shum in clear weather, are the highlands of Yemen Province, 6,000 feet above sea level, but so far no means had been found to utilize their abundant water supply for the desiccated town by the sea.

Long ago, in those dim ages of which tradition is our only historical record, and when the rainfall was presumably greater than it is now, some engineer worthy of this Twentieth Century, devised a system for providing the city with water which still endures, and is still used when enough rain falls to make it worth while.

Passing rapidly by the camel market, where a hundred complaining beasts are chewing their mournful cud and waiting for buyers or loads, we ignore the clamorous peddlers of ostrich feathers and boas, and go straight on to the farther edge of the town. There before us lie the marvellous Tanks, or artificial reservoirs, built in a cleft in the side of the crater. Aside from the Pyramids themselves, nothing on the long journey from the Gate of the West at Gibraltar, to the very end of the East, is so purely a work of wonder as these reservoirs, of which originally there were fifty or more. Tradition has it that they are the work of a Persian engineer, and date from the second Persian invasion of Arabia, about 600 B. C.

With a skill wonderful even now, the engineer took advantage of every irregularity in the schistose rock of lava, throwing out a salient angle-wall here, a re-entrant one there, utilizing every jutting spur or wave of the rock until he had constructed an elaborate and ingenious system of wholly irregular cisterns, so arranged that the uppermost filled first, overflowed into the one next below, and so on in regular course, until all the Tanks were full. As there is no soil on the sides of the crater, the slightest rainfall sends down a torrent which, meeting the low walls of these masonry dykes and angles, is turned by them and deflected into the reservoirs. Nothing soaks into the rock and is lost;

few, if any, impurities are swept down into the tiny lakes below, for where there is a bare rock uninhabited by either vegetable or animal life, what impurities can exist?

However, it is not nearly so much the ingenuity displayed in constructing the Tanks and walls that is remarkable, as it is the marvellous enamel-like cement with which they are faced and lined. Soft enough to be easily scratched with a lead-pencil—as the names of enumerable thousands of visiting barbarians of every nationality attest—it is durable enough to have withstood the action of centuries of rains and floods, and burial for other centuries under debris of the roughest sort. And withal, its color is so soft a tone, so delicate a shade of old ivory, veined with amber where it has been cracked, that it shimmers in the glaring sunlight in gentle relief against the red and brown and gray-green of the rocks surrounding. No one has ever discovered the secret process of its composition. The British engineers submitted samples, so I was informed, to various analysts all over the world—in vain. Like the pottery secret of the Robbias of Florence, the cement of the old Persians died with them, and the world is distinctly poorer for the loss.

The first English account we have of the Tanks, written in 1809, by a British army officer, speaks of them as "fine remains of ancient splendor which serve to cast a deeper desolation over the scene." With neglect and conquest, they were long uncared for, and when the British captured Aden, they had practically disappeared. Twenty years later, however, the Government recognized their exceedingly practical value and interest to the world, and undertook their restoration. Hundreds of tons of the accretions of the centuries had to be removed, and the ravages of the Arabs repaired. For years, whenever a stone coping appeared above the level of the surrounding waste, the ingenious and lazy Arabs pried it to pieces and built their houses of the carefully-hewn stones; and to-day many a squalid, filthy native den in Aden is built entirely of the massive blocks which formed part of either Tanks or curb-walls that originally conserved the city's precarious water supply.

Notwithstanding the enormous difficulties and expense, England persevered, and after spending eighteen years, and more than \$180,000, thirteen of the most picturesque of the Tanks were restored to usable condition, capable of containing about thirty million imperial, or thirty-six million American, gallons. Three of these Tanks measure each more than eighty feet in width, and a hundred in depth. These thirteen are the ones highest up in the cleft side of the crater, at the rim of which stands a grim Parsee Temple of Silence, always with an expectant vulture or two poised upon it, hungrily waiting.

But though the Tanks are beautiful by day, they are ethereally lovely by moonlight—a great pallid silver vein up the ugly black side of the burnt-out chimney of Sheol, crowned by the ghastly, appropriate Temple of Silence and its foul birds. The great unwinking Asiatic moon, expressionless as the Sphinx herself, fills the empty reservoirs with the memory of their tragic days. For in the years when Aden drank the Tank-water, the authorities sold it to the highest bidder, who retailed it to his fellow townsmen. Every drop was his—until the next shower fell, when the contract was ended, and a new bidder came forward.

Standing here at gaze centuries later, the story unfolds itself again in the time-banishing spell of the moonlight—the first drops of rain spatter heavily down upon the everlasting bare rocks; the torrent gushes down the wild steep, filling Tank after Tank to overflowing; the lucky contractor is joyful, as the rain ceases and moon and sun alternately beam upon his treasure trove; the citizens come with their skins and buckets to buy the precious fluid. We see it all in this magic moonshine.

And then the tragedy. Once more the skies darken and the winds blow and the rain descends—before the contractor can realize upon his investment. And black Ruin creeps up out of the frothing waters in these Tanks above Sheol to stare him maddeningly in the face!



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320 ACRES, Township Bathurst, County Lanark; soil and buildings A1; river at rear, creek through county road in front. Price, \$85 per acre. R. G. Bouras, Perth P.O., Ontario.

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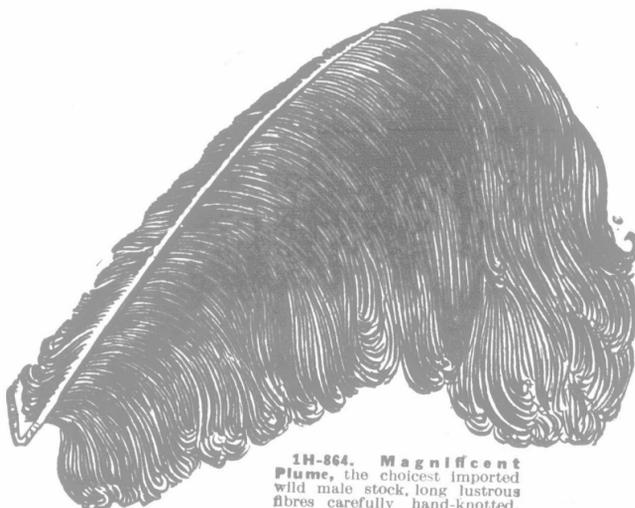
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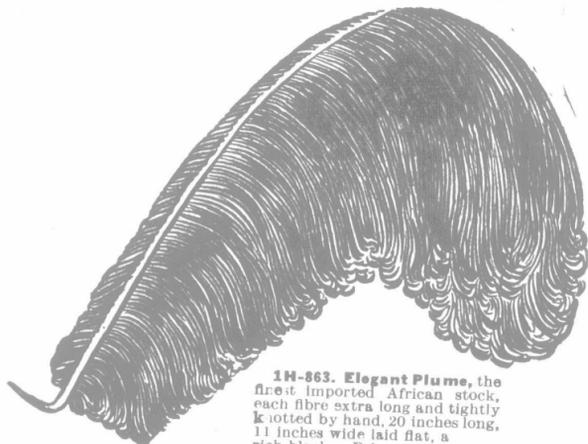
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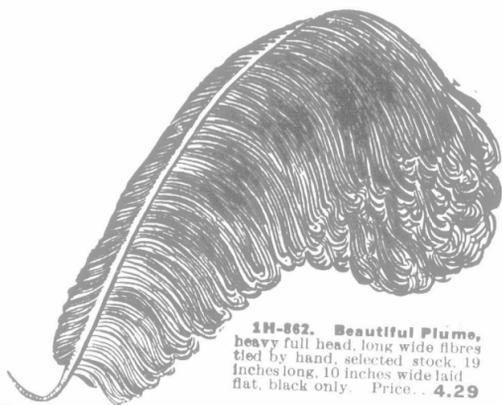
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Where the Ostrich-Feather Crop Comes From.

There are few people who know the ostrich except as they know the giraffe in the menagerie, or the side-show india-rubber man, whose chief asset is his lack of personal charm. But, however lacking in this respect, the ostrich is a money-maker, and the farmers of the Southwest have found it out. Let me introduce you to these farmers and to their crop:

In the Salt River Valley of Arizona are about 250,000 acres of rich land, soon to be made much richer and much more productive through immense irrigation works on which the United States is spending six millions of dollars. The valley is a great oasis in a parched land. Within it are produced oranges, dates, figs, and about all other fruits; but it has "made good," especially in the growing of alfalfa and the fattening of cattle. Now the cattle are to be crowded out upon the plains by the encroachment of the ostrich, if the ostrich enthusiasts are to be credited, and all the "Merry Widow" hats of the future will have decorations from our own Sunset Land.

Inclusive of those in zoos, there are about 4,000 developed ostriches on the American continents. Of these, less than 600 are in California, and a hundred or so each at Hot Springs, Ark., and Jacksonville, Florida. Nearly all the remainder are in the Salt River Valley. The Arizona industry was started in 1887, by Josiah Harbert, who brought in one pair and fourteen youngsters from California. All save three were smothered to death when being taken out to the ranch in a wagon, but from the prolific survivors have sprung most of the birds in the valley. Now there are seven farms around Phoenix.

The annual net increase of about fifty per cent. is secured mainly through the use of incubators, though on every farm a few paddocks are maintained, each for the sole occupancy of a pair of birds. Thrice a year the hen lays about sixteen eggs, and then sits, covering the eggs by day, when her drab plumage blends the better with the landscape. At night, most of the setting is done by the black-plumed male. When hatched, the chicks are guarded jealously by the male, who is dangerous to approach at such times.

Nothing but gravel is given the incubated chicks for the first week of their existence. Then they are turned into shallow pens in the alfalfa lots, possibly with some soft grain food "on the side." But on alfalfa straight do they live ever thereafter.

THE OSTRICH AT CLOSE RANGE.

Forty days at least are required for incubation, the heat being maintained at 101 degrees. A large percentage of the eggs prove infertile, and after the chicks are hatched they are very delicate until they are three months old. Moreover, the birds do not breed well or thrive satisfactorily where much visited by the public, so the show feature has almost been eliminated. Plenty of room is given. One company carries 1,800 adult birds and about 800 young ones on 1,000 acres of alfalfa. Like all other businesses where large profits are possible, there are risks and there is need of expert knowledge. But now the Arizona breeder has gained experience, and all seems serene.

Though mature and reproducing at five years, the span of an ostrich's life is about that of a human being. Birds usually begin to visibly decline at fifty, but may live to seventy-five years. Males weigh as much as 500 pounds, and have been known to stand eleven feet high. As much difference in quality is known as among horses. Some of the Arizona cocks are rated as worth \$5,000, but an adult bird in Arizona has a rough valuation of \$250, and a ten-months-old chick of \$100.

There is nothing lovable or domestic about an ostrich, as there usually is about a horse or a dog. He is nothing but an inquisitive, goggle-eyed and grouchy feather-producer. He doesn't know his keeper from a stranger, and the keepers usually seem afflicted with melancholia over their associations. About the only amusing thing on an ostrich farm is the fantastic waltz of the birds in the early morning. But there should be a degree of pleasure al-

Brains in Farming.

The farmer of the hour proposes to use less brawn and more brains, giving the drudgeries to the machinery and leaving himself time to solve the farm problems which can turn loss into a profit. Throughout the Northwest the gang plow, drawn by a gasoline tractor, plows one and one-fourth acres an hour at a cost

of seventy-five cents an acre. With the old-style plow, two acres a day could be plowed at an expense of two dollars an acre.

The threshing outfit of a score of years ago consisted of an old-fashioned separator and a horse-power. There were one or two hand cutters and one or two feeders. It took three or four men to measure and sack the grain, while from three to six stacked the straw in a cloud

of choking dust. The latest threshing machine is equipped with an automatic hand cutter, self-feeder, automatic weighing and sacking device, and a pneumatic swinging stacker, all operated by a traction engine. By the old method, it took three hours to thresh a bushel of wheat at a cost of seventeen and one-half cents. The modern machines do it in ten minutes for three and one-half cents.—Young People's Weekly.

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so in contemplating the profits of the business. One grower expressed himself on this subject in this wise: "A steer eats sixty pounds of alfalfa a day, an ostrich ten pounds. A steer at five years old is worth \$50 and an ostrich \$250. There is nothing to the steer but meat. At ten months the ostrich will produce \$10 worth of feathers, and thereafter from \$30 to \$100 worth of feathers annually. Beyond this, you have the value of the ostrich and of the increase."

Feathers vary greatly in value, some running up in their raw state to \$200 a pound. The female has a few white plumes, but her drab feathers are of little value. In each wing are about twenty-five feather sockets, from which the greater part of the "crop" is clipped. About a pound of feathers is expected from each male at each eight-months' plucking. Feathers have been exchanged between Arizona and South Africa, and the result of the comparison is a pleasing one. In acknowledging receipt of some Arizona feathers, a South African expert wrote, "They are better than anything we raise here." Yet the samples, intentionally, had been selected from ordinary stock, not from the best. Birds on alfalfa, in the mild climate of Arizona, undoubtedly have finer plumage than those ordinarily plucked on the African veldts.

In South Africa it is a felony to attempt to ship out an ostrich,—a gentle statute that suggests there must be some money in the industry. About 400,000 birds are now under private ownership there, and \$7,000,000 worth of raw feathers annually are exported, mainly through one market at Port Elizabeth.

The birds are ever a curious study. They lack sensory nerves, and seem immune to physical pain. One bird near Phoenix appears to mind little the loss of one side of his head, with one eye and part of the brain, all kicked off by another cock. The flesh was pulled over the wound by a keeper, and nature did the rest.

DOESN'T HIDE HIS HEAD IN THE SAND.

All foolishness is that ancient tale of how the spent ostrich finds fancied safety by sticking its head into the sand. It belongs to the same classification in natural history as the time-honored method of catching birds by salting their tails. Nor is their speed so great as has been assumed. For a short time an ostrich can run at the rate of a mile every two minutes, stepping thirty feet at a stride, and he can dodge like a college team quarter-back, turning at right angles when in full flight. But his lungs are too small for long-sustained effort of this sort.

Considered individually, not to say personally, the ostrich is somewhat like the earth in general. As a whole he is not beautiful, but he has beauty around his equatorial region. Neck and legs are as bare as any arctic expanse. All the shrubbery, so to speak, has been stuck on amidstships. On the whole, he is an uncanny bird, without the canniness of a turkey or the instinct of a chicken, and with only a tablespoonful of brain. He is a feathered Ishmaelite, with a cantankerous disposition and a telescopic eye that hunts trouble afar,—an oddity in a class by himself.

Verily, the ostrich, of whatever size or years, looks as though he belonged to a bygone geologic period, contemporary with the pterodactyl and its ilk. His neck is snaky, with its odd esophagus that seems to coil over the vertebrae. Some of his notes have a snake-like hiss. Yet, forsooth, he is a bird, because of his feathers, wings and a pair of legs. But, let it be known, Prof. William C. Beebe, of New York Zoological Park, has discovered in the embryo of the ostrich a striking similarity to the rudimentary saurian, and through study of the eggs of both is said to have found strong proof of the common origin of bird and reptile. In the ostrich embryo have been found even rudimentary fingers or flippers. You have read of winged serpents, and, on the authority of well-beloved folk tales, the dragon of old was an aerial sort of reptile. Possibly, it is just as well that the ostrich of today cannot fly.

Though ostrich meat is good to eat, and ostrich eggs are fine, the latest market quotations on both meat and fresh eggs forbid a large consumption till ostrich-raising has advanced to the point

where the Belgian hare industry declined. President Roosevelt missed a treat, a few years ago, in not coming to Phoenix in the course of one of his western trips. Arrangements had been made to serve him a baked ostrich, with a side dish of scrambled ostrich egg. A young ostrich, weighing not over 200 pounds, is toothsome eating. The eggs taste much like hen eggs, and are quite palatable, though each is equal to from fifteen to twenty-five hen eggs. In passing, it might be told that one of the local farms lately received a request from an eastern woman for an ostrich egg. She wrote that she "wished to set it under a hen." Just imagine some long-suffering hen trying to incubate a football!

A beneficent tariff emphasizes the fact that ostrich feathers are a luxury, by an ad valorem schedule, which calls for 15 per cent. on imported raw feathers and 50 per cent. on completed plumes,—a difference which suggests a far cry and much labor between the bird and the hat.

HARVESTING THE FEATHER CROP.

This labor begins from the time when the first crop of feathers is to be harvested. Mature ostriches are not easy to manage, but the work is simplified by throwing a hood over the head of the victim, which, being rendered sightless, becomes reasonably docile. Once removed from the bird, the feather is put through a process which gives it the superb finish seen when it crowns the head of Lady Beautiful.

Nothing is more dainty than a feather plucked from the wing of the wild wanderer of the desert. There can be no reasonable doubt that among the first ornaments of the unevolved savage was an ostrich feather. Chiefest is the ostrich plume among the ornaments enhancing beauty. As long as beauty is appreciated, so long will the ostrich plume wave.

The Morning Ride.

Each morn I mount my dusky steed,
Matchless of strength, endurance, speed,
And then to Care I say good-bye,
As o'er the road we swiftly fly:
Black Harry and I.

Over the fences, swift as light,
Over the fields, like shades of night;
Over the meadows, and far away,
Onward to meet the breaking day:
Black Harry and I.

Then into a woodland's dusky bowers,
Drenched with the dewdrops' sparkling showers
Where lingers yet the deep twilight—
Putting a check on our arrow-flight:
Black Harry and I.

Across a brooklet, purling low,
Beside a river's stately flow,
Skimming along the grassy bank,
Where stand the willows, rank on rank:
Black Harry and I.

Through meadows fair we gallop on,
Steep'd in the light of rosy dawn:
O'er ditch and wall and granite ledge,
Past house and barn, through wayside hedge:
Black Harry and I.

With flashing eyes and flowing mane,
Spurning the ground with fierce disdain;
With tireless muscles playing fast
We skim the ground like North Wind's blast:
Black Harry and I.

With dainty tread we skirt a bog,—
Then onward like the Whippet dog:
No match has he, my noble horse,
When stretched upon his morning course:
Black Harry and I.

I'd match him 'gainst the swift red deer,
Without the slightest doubt or fear:
I'd match him 'gainst the Thoroughbred,
For well I know we'd be ahead:
Black Harry and I.

Then home we turn with joyous stride,
Care free after the morning ride:
My noble horse's work is done,
But mine, alas! has just begun:
Black Harry and I.

—Mildred I. Bourlet.

"A good wife can make a veritable angel of a man."
"Yes, that's so," old Brown agreed.
"My wife came near making one of me with her first batch of doughnuts."

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SHERLOCK-MANNING Pianos are built to last, because special care is given each smallest detail in their construction. The result is a piano that pleases the eye and ear, and that will satisfy always.



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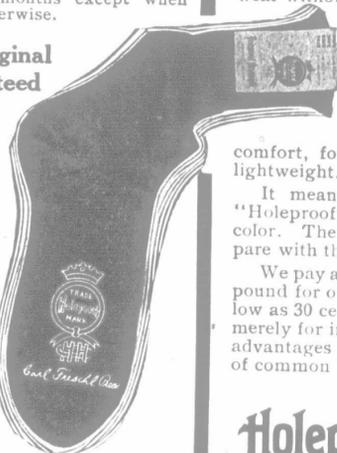
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"It's what makes your dough *rise*, Rose."

"Yes"—she encouraged.
Added Bud very sagely:

"Makes it *rise* in the mixer and *expand*
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"flour—*absorbs* all the water and milk
"—and things."

Rose grew interested.

"FIVE ROSES, said Bud, is exceedingly *rich*
"in gluten. I s'pose because it's *all* made
"from *Manitoba* wheat. Takes up a lot
"more water — makes these *fat* loaves —
"lasts *longer* too."

"Saves *money*, doesn't it?" asked Rose.

Bud in a big voice:

"The fat loaf makes the fat pocketbook."

Use FIVE ROSES *always*.

And Rose said YES.

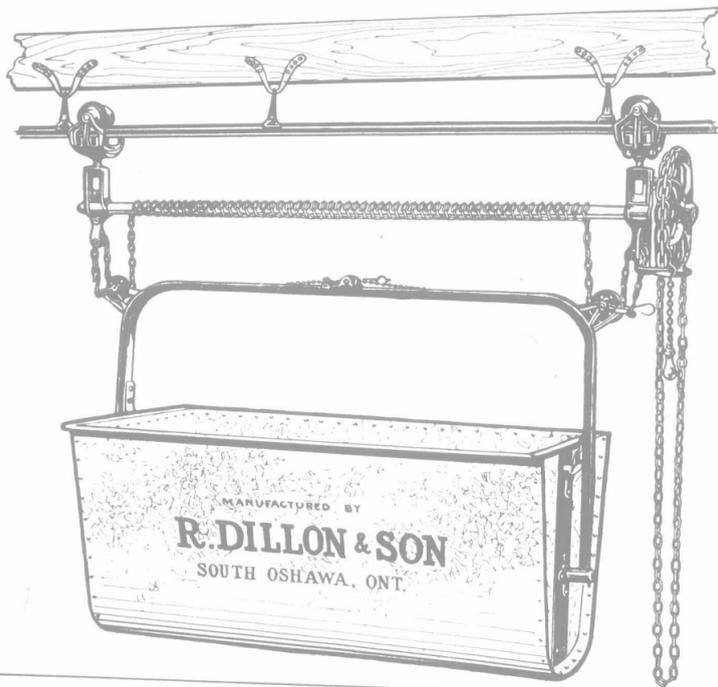
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The Beauty of Courtesy.

A story is told of Robert Browning, the noted poet, which illustrates his splendid character, in its humility and sympathy with all classes of mankind. While he and his son Barrett were living alone in Florence, Italy, the son one afternoon gave an exhibition of some of his new paintings. To the father was assigned the duty of meeting and welcoming the

guests. Late in the afternoon, when the drawing-room was full, an old and plain looking lady appeared at the door, whose face was familiar, but whose name Mr. Browning could not recall. In consequence there was some embarrassment, which was soon relieved by the woman saying, "I am the cook." Mr. Barrett said I was to come around and see the pretty pictures." Immediately Mr. Browning offered the rustic old lady his arm,

and took her around to view the pictures with as much courtesy and attention as if she were a queen.

Such conduct is a sure sign of a gentleman, and an evidence of real culture. Refinement of manners will manifest itself in respect for the poor and lowly as well as for the wealthy. All truly great men and women are humble and unaffected. It is only shallow minds which are self-conscious and haughty in their relation to

those who serve in the humbler walks of life.

She (flattering with eyes and voice)—Arthur, dear, I find that we will still need a few things to make our little household more serviceable.

He—What one thing, perhaps?

She—Well, for instance, we need a new hat for me.

When Hannibal Finished the Bridge.

By H. I. Cleveland, in Youth's Companion.

Two things had come to a halt at the lower ford of the Rio del Norte—the construction of a traffic bridge and the "Imperial Americana Circus and Menagerie."

Waite, chief engineer of construction on the bridge, sat on the east bank of the river, looking moodily across the stream.

Suddenly his eyes snapped and his face glowed with color. On a path below him, which led to a pool where the nearby cattle were watered, there moved majestically a huge elephant. The animal was accompanied by an East Indian and a white boy, the latter possibly seventeen years of age.

In the path of the elephant was a heavy beam carelessly let slip from an upper bank by the peon laborers. The animal might have stepped over the obstruction, but the boy called:

"Up, Hannibal, up!"

Obediently lowering his head, Hannibal, the chief asset of the Imperial Americana Circus, slipped his brass-mounted tusks under the beam, poised the weight as if it were a feather, and then laid it to one side. This was done with such ease as to suggest an idea to Waite's mind. He ran down to the pool, where Hannibal was delightedly laving himself.

"Hey, boy, hey!" he called.

The boy looked up, and quietly replied: "My name is Tom—Tom Ord."

Waite saw an expression of suffering in the lad's eyes, and said:

"I beg your pardon. I just had an idea; saw your elephant do a mighty clever thing with that beam. My name's Waite. I know you're with the circus at El Santo. Want to sell the beast?"

"We're broke, hungry and sick," answered Tom. "There's a chance the boss might sell you Hannibal."

"We air seek, varry seek," put in the East Indian.

Hannibal playfully squirted a torrent of water into the air. He had not enjoyed such a plunge in months. Occasionally he would stop in his play to wink solemnly at his two guardians.

Waite had little difficulty in drawing out their simple story.

The American enterprise had invaded Mexico by way of Laredo, knowing little as to the simplicity and small means of the native patrons it sought. At El Santo, a small village near the new bridge, the proprietor's resources gave out. The acrobats, unaccustomed to semitropical ways of living, were ill. The so-called menagerie, consisting—besides the venerable Asiatic elephant Hannibal—of a boa-constrictor, a few monkeys and a dozen trick and draft horses, was on the verge of starvation.

Tom Ord and Mahama, the East Indian, were in charge of Hannibal and all his performances. Tom, who had joined the circus in Kansas through love of adventure, was painfully gaining the knowledge that back of tinsel and glitter is always a reality of hard, grinding facts. His one joy on the dreary southward journey had been Hannibal, as smart and amiable a veteran of the ring as ever lived.

"See here!" exclaimed Waite. "You say that Hannibal will obey orders and is good-tempered. I'm tied up on this bridge work, have a heap of big timber to move right away, can't have a walking crane here for a month, and I can't wait."

"Now—" He stopped and began to figure busily with his pencil. "Yes, that's all right. My camp's up on the high land, and there's plenty of room in it for Hannibal and you and your friend from India. If you two can make him move timbers as he did that beam, I'll buy him outright,—that's what I was figuring about,—and put you and him to work to-morrow morning—fair wages, American grub and medicine, square deal all round. How does that strike you? Will your boss sell? Get that bully boy," nodding at happy Hannibal, "and let's find out."

With Waite thought was comrade of action, and two hours later Hannibal, Tom and Mahama passed under his control, while the wreck of the Imperial Americana Circus and Menagerie, provided with needed money, moved for the nearest railway connections with the United States.

The Del Norte is not an imposing

stream, but its bottoms are treacherous and the flood-times wild. The Salado, Salinas and San Juan have majesty in their flow through beautiful Nuevo Leon, but not the trickiness, the unexpected happenings of the humbler Del Norte. Hence there were many arguments at Monterey between dark-skinned Mexican planters and lanky, gray-eyed American contractors and builders, ending in the order for a broad and durable bridge at the lower ford.

Waite, four years graduated from college and two years a resident of Mexico, was given charge of the construction work. His skin had the pink of youth, and his eyes looked straight at obstacles. Sometimes when he was very tired,—when the sleeping peace and seeming indifference of this new-old land rose as if to grapple him at the throat, he would turn to a picture of his mother he carried in a worn and scarred water-proof case.

Waite sank caissons of steel filled with concrete through the quicksands and shifting silts of the Del Norte. Then he was ready for his superstructure, part wood and part steel. The parts of this were on hand, but not a walking crane to move them. That very day a rurale had brought him word from Monterey that the crane could not reach him for a month yet. The flood period was dangerously near, and to wait thirty days for a crane meant peril. He had derricks, but a crane would save much in time and labor.

The terror of the native Mexican workmen the morning following Hannibal's arrival was pitiful to behold. They fled in every direction. Manuel, their foreman, approached Waite, his teeth chattering.

"Senor," he gasped, making effort to use his best English, "dis debbil, dis dis—what shall I say—ees it to be wid us?"

"Manuel," replied Waite, "you and your men go to your regular work. You have the plans for the day. Hannibal is no devil; you'll see later he's a good angel. Let him alone; he'll not harm you."

Tremblingly and with many sighs the peons returned to their duties. As for Hannibal, his stomach full, his two beloved masters by his side, he rolled his small eyes over the busy scene and waited for orders.

They came fast in Waite's snappy way. To his great delight, he found that Mahama had done timber-work in Bombay with elephant teams, and knew just about what was expected of him.

Tom also grasped the situation quickly, and said to Waite: "Every couple of hours I'll take Hannibal down to the pool and let him souse. An elephant can't work well when he's hot."

"Souse him all you want. He's a brick, and so are you. Yo, ho, we're going to finish that bridge!"

Over the Del Norte rang his shrill cry of joy. Its note of defiance to obstacles swept to the west bank and up into the Cordillera, where the puma and jaguar made their home. Small-shouldered, short-legged Mexican cattle and droves of mules on the rough uplands turned their heads to hear this challenge from the spirit of the New World.

As for Hannibal, Tom and Mahama, they bent to the great task before them. Cross-beams, stringers, uprights were scattered in every direction. The orders for Hannibal were to get them in place at the derricks, from which they could be readily advanced to the piers.

Tom shouted to him from one side, Mahama guiding from another, the animal lumbered to his duties with evident joy.

In his way he signified that he preferred this work to that of the circus. The sweep of fresh air was upon him, the water-pool was invitingly near, the incessant chatter of the jungle birds possibly brought back memories of his youth, when he had been free in the wastes of the Himalayan foot-hills. And some other recollection, something strangely disturbing, returned to him.

It was about noon of the first day's work that Hannibal, returning from the pool with Tom, suddenly stopped.

He jerked his massive head toward the line of mountains in the west, drew in a long whiff of air, waved his trunk fan-fashion, and softly whistled.

"What is it, old boy?" asked Tom.

Hannibal gave no heed. He was smelling the air driven in by an easy wind from the caves, ledges and forests on the mountainside. His little eyes had

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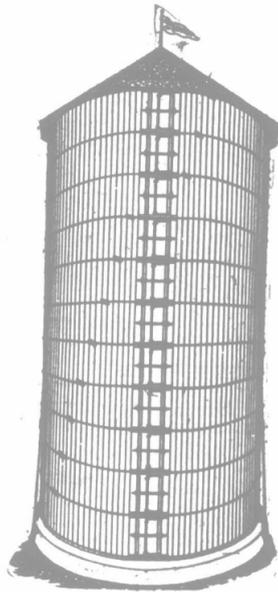
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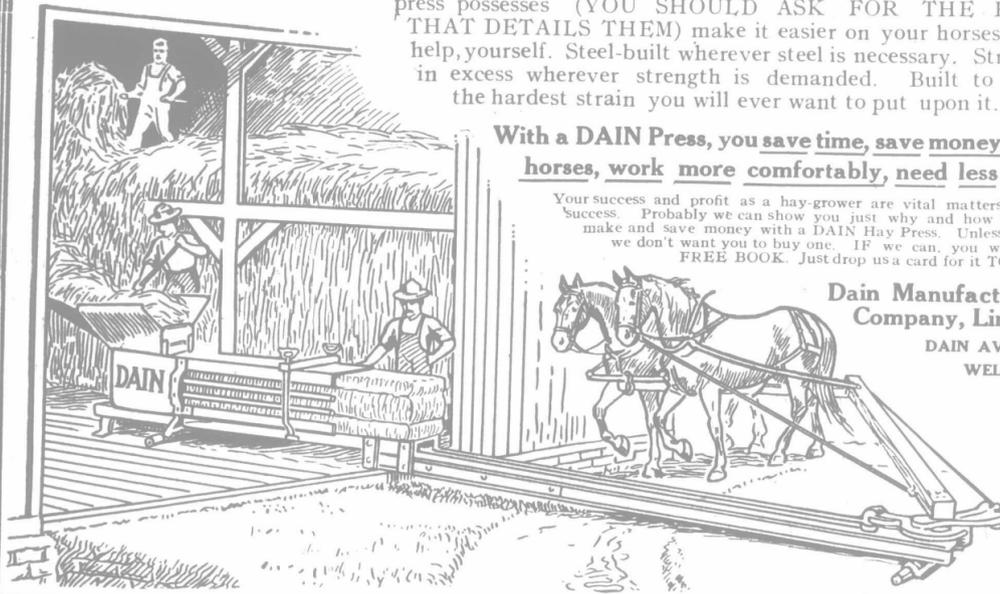
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stopped their customary twinkling and grew unusually sharp and bright. His trunk now curled, and his great muscles seemed to draw in as if he were preparing for an attack. Something in that wind spoke of days long gone by, carried the challenge of foes not seen in years, called to battle like a bugle.

Suddenly Hannibal screamed, not a scream of fear or cowardice, but of terrible defiance. The peons at the noon-tide meal slid to their knees and crossed themselves. The wild birds ceased their chattering. Far away cattle trembled, bolted and ran.

Then Mahama shouted at Hannibal in his native tongue and sharply prodded him with a little goad.

The elephant began to tremble, his muscles relaxed, and he was soon the obedient animal again. But as he ambled back to the bridge, he would now and then look anxiously at the Cordillera. Something had called to him from the peaks.

Mahama talked to Waite about it. "Eez strange things ober dere?" pointing to the range. "De beast smell someting not heez friend. He get mad. Ven he cry like dat, mooch trouble coming."

"Jaguars and all kinds of wildcats are over there," explained Waite. "The jaguar is something like the lion of your country, only worse. Perhaps Hannibal smelt one."

"Dat's eet. De day is varm, de leon get hot skin, and de air blow ober it. Dat Hannibal smell. He no like leon and leon no like him. Ooch! Hannibal no 'fraid."

Through the afternoon and the succeeding fortnight Hannibal performed his duties faithfully, but daily he scented the wind to see if that call from the jungle might come back to him, and daily the winds, which had shifted their direction, brought him no message. Mahama made for him a rough harness of sisal,—the native hemp,—and he not only lifted immense burdens, but hauled them. The peons came to admire him, and when they saw how gently he would wind his trunk about Tom, Mahama, or even Waite, and set them on his back, they developed great faith in his amiability and powers.

The flooring of the bridge was down and the side braces well set when one

morning there came riding out of the west a Mexican sugarcane planter, whose horse bolted when it saw Hannibal, and had to be led away, while its rider came ahead on foot and asked Tom for Waite. To Waite he explained that for two days past a jaguar from the mountains had been ravaging the flocks and young herds of his hacienda. He was unprovided with suitable weapons to hunt the beast, but had tracking dogs. Would the American lend him a rifle or two for the chase?

Waite was only too glad to give the planter two excellent magazine guns and explain how they should be used. The planter said that the jaguar only raided the domestic animals when extremely hungry, and therefore more than usually savage. He had heard from the native Indians that wild-animal feeding had been scarce on the range that year, and that the pumas and jaguars had been hunting in the lowlands.

"The jaguar is the king," he said. "When he is much hungry, senior, he is not afraid to take you or me."

"They have not come near our camp yet," replied Waite, "but the large amount of fresh meat we serve ought to draw them in if they're hungry."

"They will come," answered the Mexican, "when they know we are fighting them. They will come when you least expect it—they are not afraid except of guns. Adios, senior!"

But two days passed, and nothing more was heard of the jaguar raids. The animal is one of the fiercest known, a cat of extraordinary size and quickness, a better general and a harder fighter than the famed lion.

The morning of the third day after the planter's visit opened blazing hot. The sun made the Del Norte's waters look like molten glass, and on the bridge the heat was so deadly that Waite called off his men for a siesta, and with Tom and Hannibal, went down to the water-pool for a swim. All three were in the water, and Hannibal having a riot with his spoutings, when suddenly a light breeze came rippling in from the mountains. They were but two miles distant from the bridge, the level between the river and the foot-hills being covered with cane-brake.

Hannibal caught the first whiffs of the wind, and suddenly his playing stopped. The call had come again! He recognized it. It was in that wind, it was threat and defiance, a challenge his ancestors had met through all the ages of elephant life. He was out of the water in the instant, Tom clinging to his tail and shouting again for Mahama.

Once on the bank, the elephant wheeled about so that he faced the cane-brake. His eyes were blazing. Little hairs on part of his body stood upright like spear-points. He was braced in every muscle of his body, and he screamed, not once, but thrice, prodigious trumpeting that shivered the hot atmosphere. Literally, to whatever was beyond in the brake, he cried:

"Come on! I'm waiting! I'm not afraid! Come on and meet your master!"

Mahama rushed in, crying: "Me leetle von, me pet, me precious one, eet eez nutting!"

It was the language of the East Indian to his comrade and friend, but he might just as well have talked to the mountains. Twice had the wind brought Hannibal the call. No longer could it be ignored.

He made for the bridge, Tom, having partly got on his clothes, chasing after him, his goad in hand.

"He scents the jaguar!" Waite shouted. "Don't let him get away, or he'll run all over the country after that smell!"

Mahama hung back. Like all of his kind, he had great respect and fear for "the leon," as he would call it.

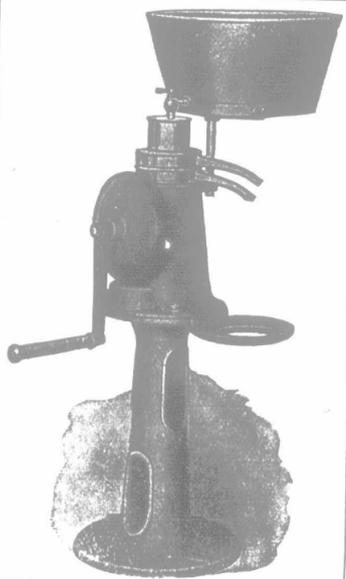
When Tom gained the bridge shortly after Hannibal, he found the resting peons scattered in every direction. The screams of the elephant and his charge up the bank had nearly driven them out of their wits.

But this was not all Tom saw. As his eyes ran along the bridge, it rested at the farther end on a thing of yellow-black, a long, tube thing, with switching tail, blazing eyes, and snarling lips that

showed two rows of ivory-white fangs. This was the jaguar, the jaguar had come down from the range, through the brake, in all the riotous heat, and now for life

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or death faced that which it had never seen before, but by savage instinct hated.

It was Hannibal that started the combat. He was mad; he had been mad for days, brooding over that scent from the mountains. Now it was in front of him, and he proposed to get it out of his nostrils once for all. He trumpeted again, and went straight for the cat, which, lightly leaping to a brace beam, crouched, drew up, and suddenly shot straight through the air for the right shoulder-point of the elephant.

But Hannibal was wary. He had fought relatives of the jaguar in his free youth, and he had measured their cunning. He slipped from under the leap as a wrestler might evade an opponent, getting a slight scratch, but tumbling the jaguar in a sprawling heap on the bridge flooring.

Without thinking that the cat might turn on him, Tom shouted:

"Go it, Hannibal! Get him!"

In running from the pool to the camp to get a weapon, Waite had fallen and wrenched his ankle, and his native servants having fled, he lay helpless on the hillside while the combat went on. Every time he tried to rise a wave of faintness swept over him.

Mahama was down in the water-pool, immersed to his neck, silently praying that the cat, after it finished Hannibal and Tom, might not reach him.

As the jaguar gathered itself for another spring, this time having no elevation to work from, Hannibal charged. His eyes were bloodshot now and a thin line of foam swept his under lip. The elephant knew that he must get the brass-pointed tusk tips into the cat and hurl his weight upon it or he was lost.

All the Mexican landscape was purple and gold, flowers of every hue, and the towering cane there. The cat leaped straight this time for the blazing eyes of the elephant, ready to cling to anything in which its claws could work while the fangs did the rest. Hannibal's trunk moved with almost incredible swiftness, and his head came very low. The cat got a smashing blow on the ribs and slid over his back, ripping here and cutting there, but getting no grip. Again, much short of wind, it went to the bridge floor.

Before it could fully recover and crouch for a new leap, Hannibal whirled, and came on it furiously.

Tom's voice rang out, "Bully boy, get him!"

The tusks did their work, the weight of Hannibal did the rest. A whirlwind of dust arose, screams and growls filled the air, then one great trumpet from Hannibal, a lifting of his head, a high spiral of his trunk. The fierce thing that had troubled his peaceful life of work on the bridge was dead under his feet.

He was bleeding from half a dozen ugly wounds, but alive and triumphant. Tom ran in on him and gave the order to leave the bridge. He did not look at the defeated enemy, but moved slowly out to where timber-work still awaited him.

Mahama came out of the pool and tenderly nursed Hannibal's wounds. None were extremely serious. He would be fit for work in the morning, although a little sore. Tom found Waite where he lay, helpless and half-fainting, on the hillside and had him taken into camp.

The builder was two days on his back before he could move about again. As he lay in his open tent, Tom brought Hannibal to him, scarred but victorious.

"Hannibal's work will be done to-morrow, Mr. Waite," he said. "All the timber'll be in."

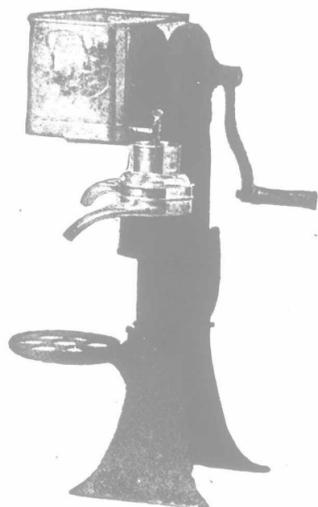
"Come to-morrow and take me down to see," answered Waite. "I've got to leave much of it to you until then."

The next afternoon Tom came back with Hannibal.

"Now, Mr. Waite," he said, "if the ankle doesn't bother too much, let Hannibal take you down."

Waite nodded. Tom spoke to Hannibal, and slowly the long trunk went out. Slowly, gently, it gathered up the crippled engineer, easily swept him through the air, and set him on the battle-marked back.

So boy and man and Hannibal went down to the finished bridge, where the flood-waters of the Rio del Norte were beginning to rush about piers that held. Far to the west the oxen-hauled, jelling



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CREAM SEPARATORS

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If you cannot come send for our Catalogue

Call and inspect this triumph in modern Separatorism and leave your name for one of our beautiful 1912 Calendars.

The Renfrew Machinery Company, Ltd.
Eastern Branch, Sussex, N. B. RENFREW, ONT.



It is most important to use **THE BEST SUGAR** for
PRESERVING

Make YOUR preserving a certain success by using

The 20 pound bags are convenient—also sold in 100 pound bags and barrels; as well as by the pound.



The St. Lawrence Sugar Refining Co. Limited, MONTREAL.

The Investing of Money

The investing of money cannot be too carefully undertaken. There are no risks of any kind in connection with the Guaranteed Investment Receipts which are issued in convenient amounts by this Company, and bear interest at from 4% to 4½%, according to the length of time for which they are issued.

Conservative investors are invited to write for full information, which will be promptly furnished on request.

FOUR OFFICES

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REGINA. SASK.

CANADA TRUST COMPANY

Please Mention this Paper.

cane carts had started for their first journey over the new right of way.

Hannibal sniffed at the winds sweeping the turbulent waters. They were sweet and kindly. He turned toward the water-pool, first placing Waite on the ground.

"He has earned it," said Waite, and he let the peons carry him back to camp.

To a Little Deaf Dog.

By Ethelyn Brewer DeFoe.

What do you think, dear little friend,
Of the silence that has come?
Why do you think—poor little friend—
The voices loved are dumb?

Does the simple creed of perfect love,
That held you firm all through,
Still fill your faithful little life
And make it right for you?

From your deep eyes the same old trust
Beams up into my own,
And from the joy that in them lies,
You do not feel alone.

But when with head upon my knee
You gaze so wistfully,
I hope, old man, you understand
The fault lies not in me.

I trust that you who know so much,
And yet so little, too,
Through your sweet dog philosophy
Know that my love holds true.

The Good Shepherd.

The Lord my pasture shall prepare,
And feed me with a shepherd's care;
His presence shall my wants supply,
And guard me with a watchful eye;
My noon-day walks He shall attend,
And all my midnight hours defend.

When in the sultry glebe I faint,
Or on the thirsty mountain pant;
To fertile vales and dewy meads
My weary wandering steps He leads,
Where peaceful rivers, soft and slow,
Amid the verdant landscape flow.

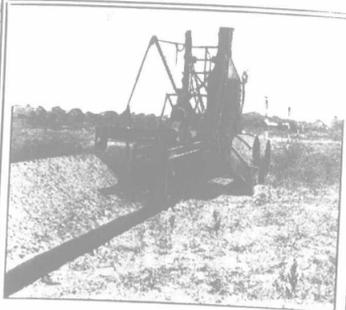
Though in the paths of death I tread,
With gloomy horrors overspread,
My steadfast heart shall fear no ill,
For Thou, O Lord, art with me still;
Thy friendly croak shall give me aid,
And guide me through the dreadful shade.

Though in a bare and rugged way,
Through devious lonely wilds I stray,
Thy bounty shall my wants beguile,
The barren wilderness shall smile,
With sudden greens and herbage crown'd,
And streams shall murmur all around.

—Joseph Addison.

She was in a restful place out at that country boarding house?

Ho—Yes; in the parlor was a sign: "This piano is closed for repairs."



**Straight from the Shoulder
Our Proposition**

NOW this is not a "ground-floor" scheme or a "get-rich-quick" offer, but if you are not afraid of work you can build up a substantial, honest business by digging trenches by machine. Machine-made ditches are demanded by up-to-date farmers everywhere. They are truer, always on a level grade. Tiling and subsoiling is no longer out of the reach of any farmer.

Here is the need, here is the demand. You can fill it and roll in the profits. Others have made \$15 to \$18 a day, \$2,500 a year, with a

**Buckeye
Traction Ditcher**

"Built for strength, built for speed, built for efficiency."

You can do the same. Two men are all that are needed for the steam machine and one for the gasoline. Your machine will be kept constantly busy in your neighborhood. Propels itself from job to job.

Write to-day for Catalogue T.

**The Buckeye
Traction Ditcher Co.
FINDLAY, OHIO.**

NO LEAK-NO RUST

STEEL TANKS V. WOODEN

The steel tank for water storage is as much superior to wooden tanks as modern steel farming implements are to the crooked sticks of our ancestors in early ages. Wooden tanks are unsanitary and liable to leak. Our steel tanks are all steel of the finest quality—self supporting—surrounded by an iron angle framework with braces added according to size of tank. The angle iron framework ensures absolute rigidity, and the braces added give the tank strength four times in excess of any strain that may be applied.

Guaranteed for ten years but will last a lifetime.

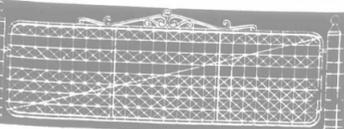
**STEEL TANK CO., TWEED, ONT.
AGENTS WANTED EVERYWHERE**

Strong and Rigid

We make Peerless Gates to last a lifetime—and to look well and work right as long as they last. The frames of

Peerless Farm and Ornamental Gates

are electrically welded into one solid piece—that's why they stand more than any other gate can. We also make lawn, poultry and farm fences of best quality. Agents wanted. Write to-day.



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In your spare time. We teach you Complete Commercial, Shorthand, Beginners' Course, Matriculation, Teachers' Courses, Civil Service, Journalism, Agriculture, Stock-raising, Mechanical Drawing, Engineering (Stationary, Traction, Gasoline), or almost any subject you need. Write for information.

**Canadian Correspondence College,
Limited, Dept. E, Toronto, Canada.**

PLEASE MENTION THE ADVOCATE.

Do not be impatient with me, for indeed I am not wishing to see old things back again, nor do I fail to appreciate modernism. Somehow, since Emerson, we have been learning that the body must be saved as well as the soul. Kingsley and Frederick Maurice taught us that, after all, beauty and strength belong to righteousness, and that sickness is to be abhorred; then Horace Mann told us that God despises a dyspeptic stomach; and so, step by step, we have come on into this scouting age; only do not let us now begin to save the body without the soul. We used to pray for an esthetic heaven, and we talked about the body, the flesh, and the devil as our trinity of evil. Among our college boys there were no calves at all nor any biceps; only a few godless fellows used dumb bells and invented baseball. Hugh Miller and President Hitchcock helped us still farther out of our world-hate; and then Walt Whitman jumped the fence altogether.

Indeed I do not wish to see the old repeated, although I would like to stroll down the pasture lot this morning, where the wild berries gardened themselves and the huge old apple trees bore loads of Sweet Boughs and Early Harvest. In those days there was not a typewriter in the United States, nor was there a spelling reform association. We spelled everything out full, with all the letters we could get into it, and that was our pride. I thought, simple head that I was, that things would always be so, and that my boys would go to spelling-matches as I had done. Thirty years before he was born, I set my eldest boy to study Greek and Latin, to read the English essayists, and imitate Carlyle. We scouted among books, and a library was the chief end of man. The end of education was to teach the architecture of words. And so we had builders who knew to the infinitesimal fraction, the fitting and the fitness of verbs and nouns and adjectives. To their sensitive ears spoke that delicate rhythm that would touch the hearts of readers.

It was this letter craft that I had planned for my children also. But to my amazement the first one picked up things, and did not care for words; the second picked up bugs and living things, and words to him were of little worth; while the third wholly renounced literature and built machines. It was genuine heredity; for they were all builders, only not one built the words. I am bound to say, that from my original standpoint, they are a stupid set. They will spell "no" for know; and for the life of me, I can't see why knot; nor what the k and the w are about in nodge. So whether I will or no, I must accept of change. I do not any longer myself scout thru Milton's "Paradise Lost" as a duty, nor do I feel any conscience about it at all, because I am no longer interested in reading Jeremiah after breakfast. I am glad that Job, and the Nineteenth Psalm, and the great parables, are neither ancient nor modern, but eternal; and I love Jesus as a great, big, handsome, human Brother; and a lot of the old questions that were so irritating have gone as the stars go when the sun comes up. They may be there yet, but they do not shine, and only owls see them or care for them.

Shall we overdo this matter? Surely not in the long run. Out of the evolution and the scouting is coming a firmer sentiment, a sweeter religion, a manlier manhood, and a reign of common sense. Forty years ago William Lloyd Garrison said to me: "You will live to see justice done to Thomas Paine, and perhaps to myself; and you will see a lot of hate replaced with love, and the world will not be the worse for it." It was a good prophecy, and there is more to come; more of the fair and just and honest. It is a grand thing that there is such a room for progress ahead, and it may take a hundred thousand years yet to make the world anywhere near as decent and comfortable as it can be made by the application of the truth already known. But progress goes on now in geometrical ratio, thank the Lord.

I am told there are 500,000 boy scouts in America, and that every one of them is obligated to be courteous to strangers and helpful to women and children. It will not be discouraging if I tell them that they were bound to just that sort of thing by the fact that they were born of women. It is well also to recall the

The Least Fuel, The Most Satisfaction



**Another Range May be Good—A
"Happy Thought" is Good**

When a range combines all the most modern conveniences and when the makers insist that only the best materials should be used, and that every range that leaves their factory should be perfect in every detail of workmanship—why, it stands to reason that the product, the

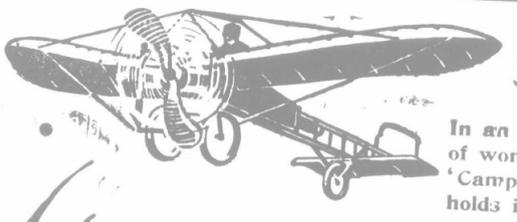
HAPPY THOUGHT

Range should be a good range, a perfectly reliable range. Take your time in buying a new range. It is the most important of your household furnishings. On it depends whether your housework is going to be a drudgery or a pleasant task, with sure results.

When you have seen the many special features of the Happy Thought, have heard the enthusiastic praise of the thousands of Canadian housewives who use it and see what a strong, serviceable fine-looking range it is, we have no doubt it will surely be your final selection for use in your home.

More than a quarter of a million "Happy Thoughts" are in daily use in Canada.

**The William Buck Stove Co., Ltd.
Brantford, Ontario.**



In an age of wonders 'Camp' ably holds its own.

'CAMP' COFFEE

When you think of its delicious flavour, when you know how quickly it can be prepared, when you've noted that it never, never wastes, can you wonder 'Camp's' as popular as it is.

Fly to your Grocer for a bottle to-day
Sole Proprietors—R. Paterson & Sons, Ltd.,
Coffee Specialists, Glasgow.

Please Mention The Advocate



The Question of Farm Power Satisfactorily Solved

Power for pumping, sawing wood, grinding and cutting feed, running the grindstone, cream separator, churn, washing machine, etc.—ready at any time—is best secured by installing an

Olds Gasoline Engine

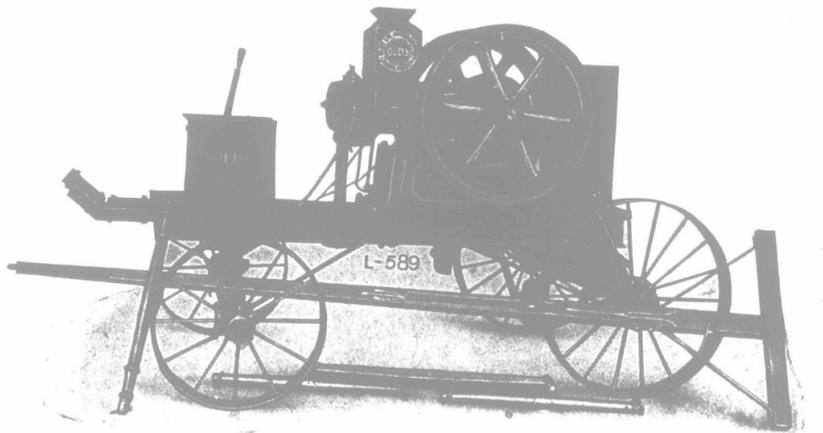
Backed by an experience of over thirty years in gasoline engine-building. Built in the largest factory in the world devoted entirely to the building of gasoline engines.

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Engines from 1½ Horse-power up.
STATIONARY, PORTABLE AND SEMI-PORTABLE.

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fact that, some seven or eight hundred years ago, Europe was quite alive with something of that sort, scouting everywhere on horseback and on foot to do deeds of gallantry. The age of chivalry was a woman's age, but it was an age also of gentlemen. It was then that the word gentlemen was invented. I do not think there were any worse things abroad then than there are to-day, only the new knighthood, thanks to our common schools, takes in a larger proportion of the people. The power of the new movement lies in this, that it is a simple movement, touching everyday life. It picks up the orange peel that might trip the feeble.

It is this new idea of LIFE that is getting hold of us, and it cannot get hold of the young folks too early. The marvel of the universe is not things, but life—life in all its processes; life budding, life blossoming and life fruiting; better yet, life thinking, life comparing, and life hoping and willing. I came, said Jesus, that ye might have more life; and that is all that is worth while to say of Christianity, that it gives a richer, broader, completer life; puts away deathly things, deathly habits, and life waste. It gives life a purpose, it sends life out to do good, it sends it into the past with conscience, and into the future with hope; and all the time it moves collateral with science in making history full of ethics, and the future full of duty. Anything but low vitality, anything but rotting, decay in our middle years, the years that should be full of strength and beauty. God is Life; life in the garden, life in the field, life like the oxen, and the bees; but broader and deeper, life brought up to the range of thought, hope, and that is exactly what the scouting spirit do for the boys if it do the right thing, it must make them children of God. It must fill them with clean, honest life.

This is not to glorify athletics, or physical life, only as that is the basis of a full life. Organized muscles, that have no purpose beyond exercise, are of no use, but propensities, themselves, are outside or beyond itself, is not worth while. It is the soul and the soul here.

must go on together. It is a glorious thing to be superbly physical, healthy in every fibre; but a soulless body, or a body with a dying soul, that is the great shame of manhood. Scouting is, or it ought to be, a new way of preaching the gospel of LIFE.

Mental Jaundice.

A new disease, or at least a new name for an old disease, has been discovered by a noted brain specialist of London. It is mental jaundice. Worrying over trifles is one cause. Greed, pride and prejudice are others. Whatever the cause, the effect is to make one look upon this beautiful world of ours with discontent, and to find continual fault with our fellow travellers toward the grave, writes Robert Webster Jones, in the Housekeeper. "Let a person once become infected with this disease," says the specialist, "and nothing but the most rigorous measures will effect a cure. I believe mental jaundice is on the increase, especially among the upper classes. It is the source of more unhappiness, to the patient as well as to those about him, than almost any other disease. Physical jaundice produces yellowness of skin, which, after a while, becomes yellowed of the eyes. This produces a condition of the eye which makes the patient's eye setting yellow. Mental jaundice is a disease. Its victim is a person who is worried or preoccupied with trifles, and troubled by his own ideas of the world."

What is the cure? The specialist says that the patient should be assured that he is not really ill, and that he should be made to realize that his own ideas of the world are not really so important as he thinks. He should be made to realize that his own ideas of the world are not really so important as he thinks. He should be made to realize that his own ideas of the world are not really so important as he thinks.

GOSSIP.

T. Reginald Arkell, Professor of Animal Husbandry at the New Hampshire Experimental Station, and only son of Henry Arkell, Arkell, Ont., widely known importer and breeder of Oxford and Hampshire sheep, was, on August 2nd, married to Miss Mabel Helen Mohaffey, of Dover, New Hampshire. "The Farmer's Advocate" extends congratulations and best wishes for a happy life to the young couple.

The Memé District Ayrshire Breeders' Club held a very successful meeting on the farm of Wm. Stewart, Memé, Ont., Wednesday, August 23rd. Over a hundred people were present, and great interest was manifested, both in the speeches and in the judging classes. The meeting was addressed by A. Hume, the President of the Club; W. E. Stephen, of Huntingdon, Que., Secretary of the Ayrshire Breeders' Association; David Hunter, of Maxville, A. B. McIntosh, B. S. V. of Stirling, R. S. Duncan, B. S. V. of Port Hope, and E. S. Hopkins, B. S. V. of Ironwood, the latter three District Representatives of the Department of Agriculture in their respective counties. The afternoon was largely devoted to practical judging. The cattle were supplied by Alex. Hume and Mr. Stewart, and were, for the most part, specimens of the best. In all, six classes, including a pair of yearling heifers and a pair of yearling heifers, two year old heifers and yearling heifers, were actually gone over and placed with thanks to Mr. Stewart after the usual routine of the day. The day was one to be remembered by the members of the club, and all who were present were away feeling that they had seen a very good thing. The day was one to be remembered by the members of the club, and all who were present were away feeling that they had seen a very good thing.

WHEN TO CUT MILLET.

Millet is best cut for hay when the heads first appear. If the heads are allowed to ripen, the tough fibrous nature of the stems and stiff beards have then approached close to maturity, detracting much from the palatability of the hay, and adding very little to it in the way of nutriment. Owing to these facts, the hay from the early millet makes a much safer food for all kinds of stock. After cutting, it should be allowed to lie in the swath until partially dry, then gathered into cocks and thus left until cured, after the manner practiced in curing clover hay or alfalfa. Cured in this way, it makes better hay than when allowed to remain exposed to the sun too long. American Cultivator.

TRADE TOPIC.

The calendar of the Eastern Dairy School, Kingston, Ont., is just to hand, and contains a complete outline of the work in the various courses, the dates of which are as follows: Long course, January 2nd to March 22nd 1912. Instructors' course, March 25th to March 30th. From April 1st to December 30th, the school operates as a creamery during which time practical work in buttermaking or milk testing can be arranged for. The school building is a modern, thoroughly modern in plan and construction, specially adapted for conducting the practical and instruction part of the course. The department is well equipped with all the latest apparatus. The school is open to students from this province and from other parts of the Dominion. For further information, apply to the school, Kingston, Ont.

Decorate Your Home with MURESCO

If your walls and ceilings are shabby you should use Muresco. In applying, all that is necessary to do is to mix it with boiling water. It dries quickly and shows no laps.

Muresco comes in many tints and pure white. We send descriptive literature on request.



MOORE'S House Colors

Preserve your property by keeping it spick and span with Moore's Paints.

These paints are made by the best paint-makers in the world. They are ready to use, being sold in sealed cans bearing our name and trademark.

The Linseed Oil in Moore's Paints is pure - It is chemically tested. When the price of Linseed Oil is high, adulteration is prevalent, and the individual purchaser (who is not able to subject the raw material to chemical test) is apt to be "stung."

MOORE'S Paints and Varnishes for every purpose.

Both Muresco and Moore's Pure House Paints are sold by dealers everywhere.

Benjamin Moore & Co. Brooklyn, N. Y. Carteret, N. J. Cleveland, O. Toronto, Can. Chicago, Ill.

Hicks—What does Bifkins remind you of?
Dicks—I hate to tell.
"Because it's a reflection on Bifkins?"
"No; on me."
"I don't understand."
Well, I'll explain. Every time I see Bifkins he reminds me of a little bill I've owed him for over three years."

Was So Nervous Could Not Stay In The House Alone

Mrs. Arthur Moore, Freeport, N.S., writes:—"I would recommend Milburn's Heart and Nerve Pills to anyone who is weak, run down and their nerves all unstrung. I was troubled with nervousness of the very worst kind, and when I started in to take your pills, I was so bad I could not stay in the house alone, nor could I sleep nights. Since taking the pills I am entirely cured and can recommend them to anyone who is nervous and run down."

To any of those suffering in any way from any derangement of the heart or nerves, we can recommend our MILBURN'S HEART AND NERVE PILLS with the greatest confidence.

They have been tried and proved to be the best in the world. Last twenty years, to be exact, we claim for them.

They are 50 cents per box or 10 boxes for \$4.50. Sent at all dealers or by mail. Write for list of prices to The F. M. Co., 102 York St., Guelph, Ontario, Can.

GOSSIP.

J. H. Patrick, Iderton, Ont., writes: "I have purchased two carloads of Lincoln and Cotswold rams through my advertisement in 'The Farmer's Advocate,' which I am shipping West, and expect to return about September 15th for another shipment."

In another column in this issue is the advertisement of the Larkin Farms, Queenston, Ont. J. D. Larkin, the proprietor, has built up an extensive livestock business, and is a noted breeder and importer of Clydesdale horses, Jersey and Aberdeen-Angus cattle, Shropshire sheep and Berkshire and Yorkshire swine. The present offering is a large selection of imported Aberdeen-Angus bull calves and yearlings, also some good cows and heifers. These cattle represent some of the best of Angus breeding, and are exceptionally fine individuals, representing the best families of the breed in Scotland. Anyone desiring a good sire to improve and build up a grade or pure-bred herd, can do no better than inspect the herds on the Larkin Farms, where visitors are always welcome.

SUMMARY OF OFFICIAL TESTS OF HOLSTEINS FOR JULY, 1911.

A New Canadian Record.

This list contains the report of the largest record made in Canada, that of Helbon De Kol, at six years, owned by E. Laidlaw & Sons, Aylmer, Ont., which produced 25.23 lbs. fat and 31.54 lbs. butter (80 per cent. fat) in seven days, and 102.86 lbs. fat and 128.57 lbs. butter in thirty days. This beats the record established last month by the four-year-old, Jenny Bonerges Ormsby, owned by D. C. Platt & Son, which made 24.61 lbs. fat and 30.76 lbs. butter in seven days, and 100.35 lbs. fat and 125.44 lbs. butter in thirty days.

Seven mature cows averaged 17.77 lbs. fat in seven days, the highest being Helbon De Kol (5631), at 6 years 10 months 14 days, 25.23 lbs. fat, equivalent to 31.54 lbs. butter; milk, 558.39. Thirty-day record—102.86 lbs. fat and 128.57 lbs. butter; milk, 2,499.57. Owned by E. Laidlaw & Sons, Aylmer, Ont.

Sara Jewel Hengerveld 2nd (6860), at 6 years 4 days, made 20.14 lbs. fat, equivalent to 25.19 lbs. butter; milk, 585.2 lbs. Owned by W. W. Brown, Lym, Ont. In thirty days she gave 78.91 lbs. fat, equivalent to 98.64 lbs. butter; milk, 2,401.5 lbs.

Four four-year-old cows averaged 16.87 lbs. fat in seven days, the highest being Princess Sasie of Malahide (8085), at 4 years 11 months 11 days; 18.87 lbs. fat, equivalent to 23.59 lbs. butter; milk, 526.13 lbs. In thirty days she made 72.63 lbs. fat, equivalent to 90.78 lbs. butter; milk, 2,216.58 lbs. Owned by E. Laidlaw & Sons, Aylmer, Ont.

Beauty Hark 2nd A (9604), at 4 years 7 days, made 18.38 lbs. fat and 22.97 lbs. butter and 498.4 lbs. milk in seven days, and 71 lbs. fat and 88.76 lbs. butter and 1,958.6 lbs. milk in thirty days. Owned by W. W. Brown, Lym, Ont.

Two three-year-old heifers were admitted, both owned by E. Laidlaw & Sons. Belle Dewdrop 6th, at 3 years 18 days, made 17.96 lbs. fat and 21.33 lbs. butter and 492.75 lbs. milk in seven days, and 59.77 lbs. fat and 82.22 lbs. butter and 2,008.95 lb. milk.

Sadie Ross 2nd (10798), at 3 years 11 days, made 14.95 lbs. fat and 17.92 lbs. butter and 438.21 lbs. milk. In 30 days she gave 64 lbs. fat and 71.44 lbs. butter and 1,940 lbs. milk.

Five four-year-old cows averaged 12.94 lbs. fat in seven days, the highest being Jenny Bonerges Ormsby (4985), at 4 years 10 months 14 days, 12.94 lbs. fat, equivalent to 16.18 lbs. butter; milk, 458.39. In thirty days they made 72.63 lbs. fat, equivalent to 90.78 lbs. butter; milk, 2,216.58 lbs.

Seven mature cows averaged 17.77 lbs. fat in seven days, the highest being Helbon De Kol (5631), at 6 years 10 months 14 days, 25.23 lbs. fat, equivalent to 31.54 lbs. butter; milk, 558.39. In thirty days they made 102.86 lbs. fat and 128.57 lbs. butter; milk, 2,499.57.

Thirty-day record—102.86 lbs. fat and 128.57 lbs. butter; milk, 2,499.57. Owned by E. Laidlaw & Sons, Aylmer, Ont.

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.

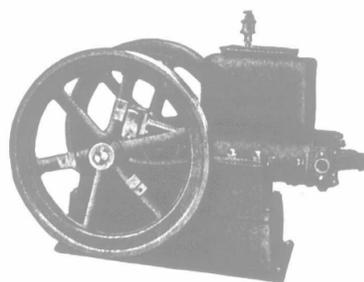
It makes money for farmers and dairy-men because it makes butter that brings the best prices.

It saves money for them because, being absolutely pure, it requires less to properly salt the butter.

39

THIS \$15 DOWN ENGINE

and balance in easy installments, without interest.



IT IS EASY TO BUY the wonderful GILSON "GOES LIKE SIXTY" GASOLINE ENGINE on the above plan. Powerful, simple, durable, dependable, cheapest running, easiest to operate of any engine made. A positive guarantee given with every engine.

TEN DAYS' TRIAL If not satisfactory, hold subject to our shipping directions, and we will return every cent of your first payment. Can anything be fairer? Made in Canada no duty. The Gilson has 30,000 satisfied users, proving that it is not an experiment, but a tried and tested engine. Ask any banker about our reliability; founded 1880. Tell us what work you have for an engine to do, and we will name you price and terms on the proper horse-power. All sizes. Send for free catalogue. Big money for agents. Write for our proposition.

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Be sure to see our exhibits at Machinery Hall, Toronto Exhibition, and Western Fair, London.

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PRONOUNCED "EASY"

Suspenders



GUARANTEED TO GIVE SATISFACTION OR MONEY REFUNDED

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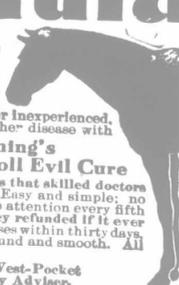
THE DOUBLE CORD SLIDING BACK ADJUSTS TO EVERY MOVE OF THE BODY

THE KING SUSPENDER CO. TORONTO, CANADA.

HORSE OWNERS! USE
GOMBAULT'S CAUSTIC BALSAM.
 A safe, speedy and positive cure. The safest, Best BLISTER ever used. Removes all bunches from horses. Impossible to produce scar or blemish. Send for circulars. Special advice free.
 W. E. YOUNG, W. L. WILLIAMS CO., Toronto, Ont.



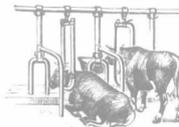
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 Any person, however inexperienced, can readily cure either disease with Fleming's
Fleming's
Fistula and Poll Evil Cure
 —even bad old cases that skilled doctors have abandoned. Easy and simple, no cutting, just a little attention every fifth day—and 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.
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Dr. Page's English Spavin Cure
 For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hock, Strains or Bruises, Thick Neck from Distemper, Ringworm on Cattle, and to remove all unnatural enlargements.
 This preparation (unlike others, acts by absorbing rather than blistering). 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:
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O.K. Canadian U-Bar Patented Steel Stanchions
 Are free and easy on the cattle, but strong and durable, being made of high carbon U-Bar Steel it is impossible to break or twist them out of shape. The swing bar will not sag and guaranteed not to be opened by the cattle.
 Write for our prices and circulars on Sanitary Stall and Stanchions.
Canadian Potato Machinery Co., Ltd.
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You Can't Cut Out A BOG SPAVIN, PUFF OR THOROUGHPIN, but
ABSORBINE
 will clean them off permanently, and you work the horse same time. Does not blister or remove the hair. \$2.00 per bottle, delivered. Book 4 for free.
ABSORBINE, JR., liniment for mankind, reduces Varicose Veins, Ruptured Muscles or Ligaments, Enlarged Glands, Gout, Wens, Cysts. Alays pain quickly. Price \$1.00 and \$2.00 a bottle at druggists or delivered. Will tell you more if you write. Manufactured only by
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 BONDED STABLES
 110 ST. ETIENNE STREET, MONTREAL.
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Horses of all Classes
Messrs. Hickman & Scruby
 COURT LODGE,
 EGERTON, KENT, ENGLAND
 Exporters of pedigree live stock of all descriptions.
 FACILE PRINCIPLES
 PLEASE MENTION THE ADVOCATE.

QUESTIONS AND ANSWERS.
 Veterinary.

MAMMITIS.

One morning one fore quarter of cow's udder was swollen and inflamed, and yielded a small quantity of milk of a dark, yellowish color. She walks very stiff in hind quarters. The swelling on the udder is spreading and increasing.

J. D. M.

Ans.—This is mammitis (inflammation of the udder). Purge her with 1½ lbs. Epsom salts and 1 ounce ginger, and follow up with 3 drams nitrate of potash, three times daily for two days. Apply hot poultices to the udder. Milk the fluid out of the udder four times daily, and after milking rub well with camphorated oil before applying a fresh poultice. Long and frequent bathing with hot water may be substituted for poulticing, but the latter is better if properly attended to.

V.

DEATH FROM TUBERCULOSIS.

Cow that would have been due to calve on May 25th, aborted on March 2nd. She died, and a post-mortem revealed the liver dotted with yellowish nodules containing pus, and her gall bladder was large and contained a thick fluid. She had refused to eat for eight days before death. Would the flesh have been fit for food if she had been fitted for the block? What caused the trouble?

A. D. W.

Ans.—The cow died from tuberculosis, for which nothing could have been done. The disease was caused by infection. If she had been fitted for the block in the early stages of the disease, before it interfered with the function of any organ, and while not extending to or involving more than one organ, the flesh would have been considered healthful, but in cases where the disease has reached that stage at which it interferes with health, the flesh is unfit for consumption.

V.

Miscellaneous.

HYDRAULIC RAM.

I have a hydraulic ram which is not giving satisfaction and I intend to remodel the layout. The lift is 65 to 70 feet above the level of the ram, and the distance from the ram to the house 250 yards. The fall available is nine feet. The level of the well supplying the ram is variable, but the flow is always sufficient for a No. 3 ram.

1. Under above conditions, what would be the correct length of drive pipe to give best results?

2. Would the pipe arrangement shown in attached sketch be all right, or can you suggest any improvement?

J. W. D.

1. 50 to 55 feet.
 2. The pipe arrangement shown in the drawing would be perfectly satisfactory unless the pipe were to spring a leak at a point above the level of the water. I would prefer to dig a foot or so deeper near the spring, and have a continuous fall in the pipe.

WM. H. DAY.

BOARDING THRESHERS.

A is hired by B by the year to work on farm, and as B lives a few miles distant, A, who is a married man, is to live in the farmhouse and board himself, and provide meals for threshers when they come to the farm, and as A has to exchange threshing with other farmers, B claims that he should not be entitled to pay for meals consumed by the threshers at his farm. What is your opinion, nothing having been mentioned about same in agreement?

ENQUIRER.

Ans.—It would seem clear that A should be remunerated for the meals provided in excess of what he receives when exchanging threshing, and it would, in our opinion, be only fair for him to have some pecuniary consideration besides, to compensate for the extra labor and expense of boarding a gang over the cost of meals regularly provided for himself in his own home.



Imported Clydesdale Mares at Auction

At HISCOX'S STABLES, adjoining London Club and Bank of B. N. A., LONDON, ONT., on

Thursday, Sept. 14th, 1911

There will be sold by Auction without reserve

17 Imported Clydesdale Mares and Fillies 17

Two and three years old, all registered in the Scottish and Canadian Stud Books. Certificate will be given with each.

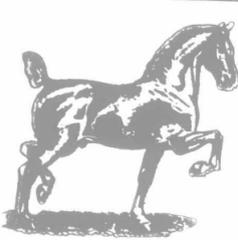
Sired by such noted stallions as Baron Clyde, by Bargy's Pride; Count Victor, by Hiawatha; Clan Favorite, by Royal Favorite; Radium, by Hiawatha; Prince Sturdy, by Cedric; Lathrisk Baron, by Baron's Pride, and Othello, by Revelant.

Good judges have pronounced this the best lot they have seen imported to this country.

SALE TO COMMENCE AT 9.30 a. m.

AUCTIONEER:
CAPT. T. E. ROBSON.

Proprietor: JAMES SCOTT,
 Phone 343, WATERLOO, ONT.



Union Horse Exchange

UNION STOCK YARDS,
TORONTO, CANADA.

The Great Wholesale and Retail Horse Commission Market.

Auction Sales of Horses, Carriages and Harness every Monday and Wednesday. Horses and Harness always on hand for private sale. The only horse exchange with railway loading chutes, both G. T. R. and C. P. R., at stable doors. Horses for Northwest trade a specialty.
J. HERBERT SMITH, Manager

Clydesdales! Clydesdales!
Spring Hill Top Notchers



Gentlemen, we wish to remind you that owing to our late importations we won't be showing at any of the fall exhibitions. Our lot comprises fillies and mares, stallions, 3 and 4 years old. They are the ripe cherries every one of them, and must be sold at the lowest possible price to make room for this fall importation. There's no man who ever buys a stallion or mare but who comes back again; why, because we have the goods and back up what we say. We wish to thank every one for their kind patronage in the past. Yours truly,

J. & J. SEMPLE, Milverton, Ont., and La Verne, Minn., U. S. A.

Ormsby Grange Stock Farm
ORMSTOWN, P. QUE.

A full stock of CLYDESDALES, imported and home-bred, always on hand, at prices and terms to suit breeders. Correspondence solicited.

DUNCAN McEACHRAN, Proprietor.

WILLOWDALE STOCK FARM

Has now for sale a choice lot of young stock of each of the following breeds:

Clydesdales, Shorthorns, Chester Swine, Shropshire Sheep

Some extra good young bulls, descendants of Joy of Morning and Broad Scotch.

Write for prices and catalogue to:

J. H. M. PARKER, Prop., Lennoxville, Que.

ROSEDALE STOCK FARM HAS FOR SALE

Imported and Canadian-bred CLYDESDALE and SHIRE HORSES, PONIES, SHORTHORN CATTLE and LEICESTER SHEEP. A choice importation of the above animals was personally selected in June. For further particulars write:

J. M. GARDHOUSE, WESTON P. O., ONT.

8 miles from Toronto by G. T. R., C. P. R. and electric railway, and long-distance telephone.

Bay View Imp. Clydesdales We have got them home, 11 fillies and 7 stallions, show horses bred in the purple, big in size, and quality all over. If you want something above the average come and see us. Prices and terms the best in Canada.
John A. Boag & Son, Queensville, Ont.

Mount Victoria Stock Farm, Hudson Heights, P. Q.
 We have for service this season the Champion Imp. Clydesdale stallions Netherlea, by Pride of Blacon, dam by Sir Everard; also Lord Aberdeen, by Netherlea, and the Champion Hackney stallion Terrington Lucifer, by Copper King. For terms and rates apply to the manager.
T. B. MACAULAY, Prop., ED. WATSON, Manager.

JUST ONE 3-year-old Clydesdale Stallion
 left. A well-bred colt that will make a ton horse. Price right for quick sale.
BARBER BROS., GATINEAU PT., QUEBEC.

IMPORTED CLYDESDALE FILLIES
 My latest importation arrived June 6, 1911, ranging in ages from 1 to 4 years, and are all of good quality and large type. Have also a couple of stallions for sale at right prices. Long-distance phone.
GEORGE G. STEWART, Howick, Que.

Shire Stallions and Mares, Shorthorn Cattle (both sexes); also Hampshire Swine. Prices reasonable.
Porter Bros., Appleby, Ont., Burlington Sta. Phone.

CLYDESDALES AND PERCHERONS
 My second importation this year will land about the last of September, and will consist of the best that can be procured in Scotland and France. Don't fail to see my exhibit at Toronto Exhibition. Terms to suit.
T. D. ELLIOTT, BOLTON, ONTARIO

HIGH-CLASS IMPORTED CLYDESDALES
 I have Clydesdale stallions and fillies for sale, every one of them strictly high-class in type, quality and breeding. Stallions over 1000 lbs. and fillies of superb form and quality. If you want the best in Canada, write to me.
J. S. MURPHY, Markham, Ont.

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DISCARDING Complicated and Cheap CREAM SEPARATORS

Others who have bought disk-filled, complicated and cheap cream separators are now discarding them for

SHARPLES Tubular Cream Separators

These people paid good money for the machines they are discarding. Do you suppose they would change without good reason? They realize that Tubulars repeatedly pay for themselves by saving what others lose. Could there be a better reason for changing?

Can you afford to ignore the experience of others, whose names we could give you by thousands? Others have finally got Tubulars. You will finally have a Tubular. Why not get the Tubular first?

The Tubular has done work equal to 100 years' service in a five to eight cow dairy at a total cost of only one dollar and fifteen cents for oil and repairs. Lasts a lifetime. Guaranteed forever by the oldest separator concern on this continent. Dairy Tubulars have no disks. Have twice the skimming force of others. Skim faster and twice as clean. Our local representative will gladly show you a Tubular. If you do not know him, ask us his name. Write for catalog No. 199



All There Is To Dairy Tubular Bowls

30 Yrs

THE SHARPLES SEPARATOR COMPANY,
Toronto, Ont. Winnipeg, Man.

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We have a large selection of IMPORTED ANGUS BULL CALVES and YEARLINGS for sale. Also a few heifers and cows. These cattle represent the most desirable blood lines and families of this breed in Scotland, and are an exceptional lot of fine individuals.

Prices Reasonable

This is an opportunity to introduce the best imported blood in your herd. Angus sires are noted for their prepotency, and thus are extremely desirable for improving and building up herds of grade cattle. You are cordially invited to inspect our herds and stock.

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Clydesdale Horses
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J. D. LARKIN, - Owner
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Canada's greatest herd. Over 50 to select from. Bulls of all ages, females of all ages. Show stock a specialty. Anything in the herd is for sale. Foundation stock at very reasonable prices.

Long-distance phone. L. O. CLIFFORD, Oshawa, Ont.

Morrison Shorthorns and Tamworths

Present offering: A number of excellent 3-year-old heifers to calve in the fall, a number of heifer calves of best milking strains; also two bull calves. Will be sold reasonable. My TAMWORTHS are bred from the best blood in England; both sexes for sale, from 2 to 10 months old. Young sows, dandies, in farrow to first-class boars.

CHAS. CURRIE, Morrison, Ont.

Pleasant Valley Farm Shorthorns—Herd headed by Scottish Signet, and consisting of females of the leading Scotch families. Have for sale several good young bulls; also cows and heifers. Correspondence solicited. Inspection invited. Farm 11 miles east of Guelph, C. P. R., half mile from station. GEO. AMOS & SONS, MOFFAT, ONTARIO

Robert Miller, Stouffville, Ont. Can supply young bulls and heifers of the very best quality, of the best breeding, and of a very high class, at prices that you can afford to pay. The young bulls are by one of the greatest sons of Whitehall Sultan. They are good colors, and will make show bulls. I also have two good imported bulls at moderate prices and of choice breeding, and some cows and heifers in calf to Superb Sultan; the calves should be worth all the cows will cost. Some beautiful young imported Welsh Ponies still to spare. It will pay you to write, stating what you want. Glad to answer inquiries or show my stock at any time. Business established 74 years.

ELMHURST SCOTCH SHORTHORNS AND LARGE ENGLISH BERKSHIRES
H. M. VANDERLIP, Importer and Breeder, Cainsville, Ont. Langford Sta. Brantford & Hamilton Radial in sight of farm. Bell phone.

Salem Shorthorns I am offering a number of heifers, different ages, for sale. They are bred in the purple and should interest any body in search of the right kind.
J. A. WATT, SALEM, ONT., ELORA STATION.

Springhurst Shorthorns and Clydesdales I am now offering a number of heifers from 10 months to 3 years of age. Anyone looking for show material should see this lot. They are strictly high-class, and bred on show lines. Also several Clydesdale fillies, imp. sires and dams, from foals 2 years of age off. Harry Smith, Hay Ont., Exeter Sta.

QUESTIONS AND ANSWERS. Miscellaneous.

FEED FOR YOUNG HOGS.

Which is the cheapest feed for young hogs (from weaning time), wheat 75c to 80c. per bushel, or middlings at \$22 to \$23 per ton, farmer having mill to do his own grinding? J. D. M.

Ans.—This depends on the quality of the middlings to some extent, but if they were of good quality they would likely be the cheapest feed, because young pigs would do better on them than on wheat. Good middlings contain about half as much again digestible protein as wheat, about a third less digestible carbohydrates, and three times as much fat by weight. They are generally found to give better results as a feed for young stock than whole wheat.

TWO COMMON MEADOW WEEDS.

Enclosed find two specimens of weeds growing in a clover field. What are they, and are they dangerous? J. F. M.

Ans.—No. 1 is buckhorn, or narrow-leaved plantain, a very common weed in clover and meadow fields. Sow clean seed, practice short rotation of crops. It is easily kept under control by hoed crops.

No. 2 is wild carrot, a somewhat objectionable weed in waste places along roadsides, in old meadows, and occasionally in cultivated fields. Breaking up the meadows and putting the field under a regular short crop rotation will suppress it.

UMBILICAL HERNIA.

We have a colt three months old which has umbilical hernia the size of a duck egg. I had noticed in a former "Farmer's Advocate" (which has been misplaced) a remedy for this. It mentioned some kind of a pitch, and it is the remedy I would like to try. G. T. W.

Ans.—Apply a truss or bandage with an elevation about the size of half a baseball on it. Apply so that the elevation presses upon the rupture and keeps it in place. Arrange truss with straps passing forward and attached to a strap around the colt's neck, so as to prevent slipping backwards. If this does not effect a cure, get your veterinarian to operate. In most cases nature effects a cure, and it would probably be wise to leave it alone until cold weather. A Burgundy pitch plaster about six inches square has been recommended. It is made by spreading the pitch on a piece of moleskin. Split a cork in two lengthwise, put one-half flat side down on the center of the plaster, and, after warming, apply it to the part with the round side of the cork against the opening. Iron the plaster with a hot smoothing iron to insure perfect adhesion.

FEEDING VALUE OF BUCKWHEAT.

Have two small fields of buckwheat which I sowed for plowing down, but now purpose leaving to ripen for crop, and have heard varying reports as to feeding value of both grain and straw.

1. What would be the feeding value of buckwheat straw to cut and mix with ensilage?

2. How does the grain compare with barley or peas for feeding to pigs or cows?

3. Would it be a profitable pasture crop if stock were turned into it now, when it is still quite green? P. E. R.

Ans.—1. Buckwheat straw has a composition much like that of wheat straw, but it is a little higher in digestible protein and fibre than wheat straw. It is so fibrous that it is not of high value as a stock food, and would be of indifferent value as silage.

2. The feeding value of the grain per 100 lbs. is from 75 to 80 per cent. that of peas, and nearly equal to that of barley, being a little lower in digestible crude protein and carbohydrates, and higher in fat. It is not advisable to feed it alone. Better results are usually obtained when fed in a mixture with other grains, and when buckwheat does not constitute more than one-third of the grain ration.

3. It would not prove very satisfactory as a pasture crop because of its coarse fibrous nature, and besides it is not very palatable as a green feed.

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Both clean and fire-proof—no dust and dirt falling, as from plaster ceilings. Costs no more, but looks thrice as artistic. The life of a plastered or papered ceiling is short and nearly every year needs repairs. Our *Metallic Ceiling* will last as long as the house—always fresh and clean. We can send you hundreds of pretty designs to select from for both ceilings and walls.



Our beautiful free booklet tells you all about Metallic Ceilings and Walls. Send for one.

"Really I don't know how people can stand the constant drudgery necessary to keep the ordinary ceilings and walls clean. Metallic is so clean and sanitary."—The Philosopher of Metal Town.

MANUFACTURERS 1749



Aberdeen-Angus Cattle—Any number of females for sale at easy prices and terms. Correspondence invited. Glengore Stock Farm. GEO. DAVIS & SONS, Props. Alton, Ont.

ABERDEEN - ANGUS

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

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

Balmedie Aberdeeu-Angus I am offering for sale young bulls and heifers of the highest types of the breed. Show stock in show condition a specialty. Bred on the most popular lines. THOS. B. Broadfoot, Fergus Sta. Wellington Co. Ont.

WILLOW BANK STOCK FARM Shorthorns and Leicesters

Herd established 1855, flock 1888, have a special good lot of Shorthorns of either sex to offer of various ages; also a grand lot of Leicester sheep of either sex—a few imported ones to offer. JAMES DOUGLAS, Caledonia, Ontario.

"The Manor" Scotch Shorthorns

Present offering: 1 choice yearling bull, an "Undine," g. dam imp. Young cows in calf. Yearling heifers: Clippers, Minas, Wimples, Julias, etc. Inspector solicited. Prices moderate. Phone connection.

J. T. GIBSON, DENFIELD, ONTARIO

SHORTHORNS AND SHROPSHIRE

For sale: Heifers and calves, shearing rams and ram lambs, also a few young Berkshire sows. JOHN RACEY, Lennoxville, Quebec.

"You are arrested on a very serious charge, my good man," began the Court, looking at the man severely. "You are accused of getting into a fight and hitting the complainant over the head with a bottle. What have you to say for yourself?" "Your honor, I didn't mean to hurt him. I never thought that it would hurt him very much, 'cause the bottle contained nothing but a soft drink," returned the prisoner.

WASH your hands—not as if you were afraid of them—but give them a genuine, satisfying, cleaning wash with "SNAP".

There is only one genuine "SNAP". Get it. 15c. can.

Bog Spavin

Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the blemish came.

Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid blemishes—Bog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be limited. Easy to use, only a little required, and your money back if it ever fails.

Fleming's Vest-Pocket Veterinary Adviser

describes and illustrates all kinds of blemishes and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.

FLEMING BROS., Chemists
75 Church St., Toronto, Ontario

Scotch-bred SHORTHORNS!

During the present month am offering four very choice young bulls, ready for service, of the best breeding and quality, at very reasonable prices. Also some good young cows and heifers, with calves at foot

H. J. Davis, Woodstock, Ontario
Long-distance Bell 'phone.

Fletcher's Shorthorns and Yorkshires

Stock bull "Spectator" (imp.) = 50094 = for sale or exchange; also choice heifers. I also offer my (imp.) Yorkshire boar for sale or exchange.

GEO. D. FLETCHER, Binkham, Ont.
Erin station, C. P. R.

OAKLAND SHORTHORNS

Our herd, numbering about 50 head, should be inspected by any intending purchasers. Many of the cows are excellent milkers and grand breeders. Many young heifers and a few bulls for sale. Scotch Grey = 72692 = at head of herd, is one of the best bulls in Ontario. Prices reasonable.

JOHN ELDER & SON, HENSALL, ONT.

Maple Lodge Stock Farm

1854-1911

A splendid lot of Leicesters on hand. Shearlings and lambs sired by imported Wooler, the champion ram at Toronto and London, 1910. Choice individuals and choice breeding.

A. W. SMITH, Maple Lodge, Ont.

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

If you want a good Short-horn bull, we have them. Canadian-bred and imported. Females all ages. Also a few good YORKSHIRES—boars and sows. Prices right.

Phone connection. Kyle Bros., Ayr, Ont.

Shorthorns

Choice selections of bulls and heifers at all times for sale at very reasonable prices. **Robert Nichol & Sons, Hagersville, Ont.**

Shorthorns and Swine

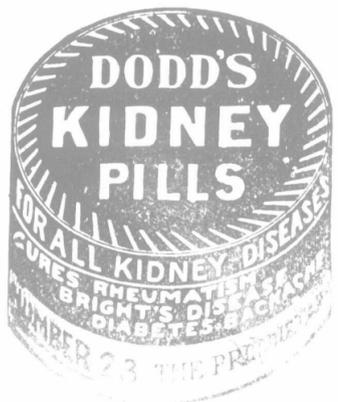
Am now offering a very choice lot of cows and heifers, safe in calf, and some choice young bulls for the fall trade; also Berkshire and Yorkshire pigs; showyard material.

ISRAEL GROFF, Elmira, Ont.

HER CAREER

"As I understand it, they have lost their money, but all of the daughters are able to earn their own living, save one, who is most idle and incompetent. What will become of her?"

"She'll have to get married." The Herald reporter.



QUESTIONS AND ANSWERS. Miscellaneous.

RIGHT TO FRUIT.

A engages to work for B for one year for a certain consideration, B agreeing to furnish a house for him free. The house is situated in an orchard of about one acre extent, in which are fruit trees of various kinds. B agrees to let A have a garden, which is inclosed away from the house, but there was nothing said about the fruit. Is A entitled to the fruit or B?

Ans.—We do not see that A has any claim upon the fruit.

SYPHON—HYDRAULIC RAM.

We have a running stream 300 feet from house, but a bank about 10 feet high between house and stream. Would like to pipe it to house.

1. What fall would be necessary to keep water running if once forced to run?
2. What size of pipe would you advise?
3. How should one guard against pipe becoming stopped with sand?
4. Or would you advise installing a ram?

Ans.—1. A foot or two of fall would make the water run slowly, but a greater fall would be more satisfactory from every standpoint.

2. The size of pipe will depend somewhat on the fall obtained. If you can't get more than a couple of feet of fall, you had better use a 2-inch pipe. If you could get 4 feet, a 1½-inch pipe, and 8 feet, a 1¼-inch pipe. To start the syphon flowing, you would have to attach a pump of some kind to the lower end of the pipe.

3. This can hardly be answered definitely without knowing something of the conditions with regard to sand in the river. I believe, however, there would be no danger of the pipe becoming blocked with sand, except by the end of the river becoming buried in sand. To obviate this difficulty, the end of the pipe should be supported some distance from the bottom of the stream.

4. From the data given, it is impossible to tell whether a ram would work, as you have not indicated whether fall to the ram could be got on the riverward side of the bank.

WM. H. DAY.

TRANSIENT TRADERS.

"That no transient trader or other person who, after the passage of this by-law, shall occupy any house, store, street, alley, or other premises in the village of ——— for temporary periods, and whose name has not been duly entered on the assessment roll of the village in respect of income or personal property for the then current year, shall offer for sale, sell, or expose for sale, any kind of goods, wares or merchandise, by auction, or in any other manner conducted by themselves, or by a licensed auctioneer, or by their agent, or otherwise, without paying before commencing to trade, the sum of \$50, by way of license, that the sum so paid as license shall be credited to the trader paying the same, upon and on account of taxes for the then current year, as well as any subsequent taxes. Should such trader remain within the municipality of the village of ——— a sufficient time for taxes to become due and payable by him, and in any other event to be taken and used by the municipality, aforesaid as a portion of the license fund of the said village."—

The intention of one of the village of ——— is to ———

Is it legal for a transient trader to ———

Why You Need a New Range



Made in Three Other Styles

Perfect Baker A Fuel Saver

Body Made of Malleable and Charcoal Iron. Adding 300% to Life of Range

Some housewives who display a remarkable amount of broad, sound, common sense along other lines, persist in the delusion—and it is a delusion—that they are really practicing economy by trying to get along—to get results—out of an old, worn-out range merely to save the price of a new one.

Your old range or stove was put together with putty and stove bolts and probably you can stick a pen-knife in the seams and joints anywhere on it where the stove putty has crumbled away. When a range gets in that condition, it takes fuel enough to warm all outdoors in order to get your oven hot enough for baking—and then you run the risk of burning whatever is in the oven. You can soon burn up the price of the best range ever made in a useless waste of fuel in an old, worn-out stove or range—and that's neither practical economy nor good management.

If you would practice real economy in your household management, it will pay you, the next time you are in town, to call on the dealer who handles it and examine closely into the perfect baking and remarkable fuel saving qualities of the

Great Majestic Malleable and Charcoal Iron Range

Outwears Three Ordinary Ranges

It is the only range made entirely of malleable iron and charcoal iron. Charcoal iron won't rust like steel—malleable iron can't break, and while the first cost of a Great Majestic may be more than some other ranges, it outwears 3 ordinary ranges.

Movable Copper Reservoir

The reservoir is all copper, heated like a tea kettle through copper pocket (stamped from one piece of copper) setting against left hand lining of fire box. It boils 15 gallons of water in a jiffy and, by turning lever, the frame—and reservoir—moves away from fire. This feature is patented and can be used only on the Majestic.

Ask your Dealer to show you the greatest improvement ever put into a range—makes Majestic 300% stronger where other ranges are weakest.

Other Exclusive Features

It's the best range at any price, and should be in your kitchen. It is for sale by the best dealers in nearly every county in 40 states. If you don't know who sells them in your vicinity, write us and we will tell you, and send you our booklet, "Range Comparison". Every farmer's wife should read this booklet.

Half The Fuel

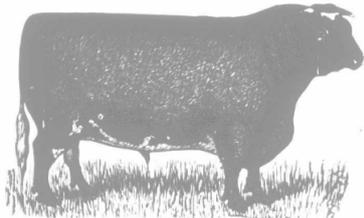
The Majestic is put together with rivets (not bolts and stove putty) making it absolutely air tight, like an engine boiler. The joints and seams will remain air tight forever as neither expansion nor contraction can affect or open them.

Pure Asbestos Lining

In addition, it is lined with pure asbestos board, covered with an open iron grate—you can see it. No heat escapes—no cold air gets into the oven—saves half the fuel and assures perfect baking.

Majestic Mfg. Company, Dept. 37 St. Louis, Mo.

The Range with a Reputation



ARTHUR J. HOWDEN & CO.
ARE OFFERING

15 High-class Scotch Shorthorn Heifers

At moderate prices, including Cruickshank Non-pareils, Cruickshank Villages, Marr Emmas, Cruickshank Duchess of Glosters, Bridesmaids, Bruce Fames, Kinellars, Clarets, Crimson Flowers, and other equally desirable Scotch families, together with a member of the grand old milking Atha tribe, which have also been famous in the showing.

Arthur J. Howden & Co., Columbus, Ont.

Shorthorns and Clydesdales

PRESENT SPECIAL OFFERING:

Seven choice young Scotch bulls, from 9 to 15 months; 25 cows and heifers of choicest breeding. This lot includes some strong show heifers for the yearling and two-year-old classes. A pair of imported Clyde fillies, two and three years old (bred).

W. G. PETTIT & SONS, Freeman, Ont.

Long-distance phone.

Burlington Jct. Sta., G. T. R., ½ mile from farm.



SHORTHORNS

Sold out of Bulls. Would be glad to have your inquiries for anything else.

CATALOGUE ON APPLICATION.

JOHN CLANCY, H. CARGILL & SON, Proprietors,
and Managers, Bruce Co., Cargill, Ont.

Scotch Shorthorns

Michael J. Bros., Burlington, Ont.

Scotch Shorthorns

Michael J. Bros., Burlington, Ont.

HAS USED DR. FOWLER'S Extract of Wild Strawberry For The Last Fifteen Years

Mrs. Duncan McRae, 62, 6th St. North, Brandon, Man., writes:—"It is much pleasure for me to say that I have used Dr. Fowler's Extract of Wild Strawberry in my home, every Summer, for the last fifteen years.

"I have six children and have used it on every one of them.

"I use it myself and so does my husband. Last summer my baby, seven months old, was taken very sick with Summer Complaint, and we thought he would die. We got a bottle of Dr. Fowler's Extract of Wild Strawberry and started giving it to him in small doses and in three days he got quite well, so we kept on with the medicine for about a week or more and he became as well as ever.

"My little girl, two years old, was taken very bad with the same trouble, and I used two doses of the same medicine and she was completely cured.

"Myself and my husband think there is no other medicine so good for all bowel complaints.

"If anyone wishes to know what an excellent remedy Dr. Fowler's Extract of Wild Strawberry is, I am willing to tell them what it has done for me."

ASK FOR "DR. FOWLER'S" AND INSIST ON GETTING WHAT YOU ASK FOR.

Manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

DON JERSEYS I

Contains more of the blood of Golden Fern's Lad than any other Jersey herd in Canada. For sale are heifer calves from 4 to 9 months of age, and young bulls from calves to 1 year.

DAVID DUNCAN, DON, ONT. Duncan Station, C. N. R. Phone connection

High Grove Jerseys No better blood in Canada. Present offering: Two choice young solid-colored bulls about 15 months old, out of heavy-producing dams. ARTHUR H. TUFTS, P. O. Box 111, Tweed, Ont.

DR. J. M. STEWART'S LIGHTNING COLIC CURE

Is the result of thirty years of careful study of the causes and effects of colic. Colic kills more horses than all other diseases combined. Our remedy stimulates and relieves affected parts immediately, and by its laxative properties cleanses and removes the cause.

Absolutely no bad after effects, as is the case with ninety-five per cent. of the cures on the market. Colic may kill your horse or cow within one hour, unless you have this remedy for instant use. Why risk the loss of a valuable animal when you can have this remedy at hand. Cost per bottle containing two doses only 75 cents. We refund your money if it fails. Write the

PALMER MEDICAL COMPANY, LIMITED Windsor, Ontario.

HOLSTEINS

MONRO & LAWLESS

Elmdale Farms, Thorold, Ont.

Homewood Holsteins!

We will have a few members of our herd at Toronto Exhibition. Also a few choice heifer calves, one yearling, for sale. We would be pleased to meet our customers there. M. L. Haley, M. H. Haley, Springford, Ont.

MINSTER FARM

Holsteins and Yorkshires

R. HONEY, Brickley, Hastings St., North York, Ont. County, offers bull calves, R. O. P. cows, and from a son of Count Hengerveld-Fayne De Kol, also heifers and some to mate.

Holstein Cattle

The most profitable dairy breed. Illustrated description of American-Friesian Ass'n of America. F. L. HOUGHTON, Secy, Box 10, Brattleboro, Vt.

QUESTIONS AND ANSWERS. Miscellaneous.

A MINOR'S NOTE.

Can a note given by a minor be collected by law? J. A. P., Ontario.

Ans.—Generally speaking, no. But there are some exceptions to the general rule, as, for instance, in the case of a note given to a life insurance company in payment of premium.

PRESERVING INSECT COLLECTIONS.

I have made several collections of beetles, moths and butterflies, but the specimens all suffer either from becoming too dry and falling apart, or more particularly from insect life, which destroys the bodies. Can you suggest a means of protecting them? T. B.

Ans.—Insects are usually killed with potassium cyanide, and if moths, they should then be placed on spreading boards and shaped. After being on these until dry, they should have an insect pin put through the last segment of the thorax and pushed down about two-thirds of its length. Place the insect on the pin in a special insect box or case, with a lid or glass cover, which can be kept tightly closed. Moth balls, or some such odoriferous repellent, should be kept in the box to keep the specimens from the ravages of these small parasites.

HENS AILING.

Would you kindly tell me what is wrong with my hens, also the cure? They take a swelling under the eyes, which completely closes the eyelids, and are unable to close their mouths. They do not seem sick, and all have recovered that have had it. There has never been more than two birds affected at the same time. E. S. M.

Ans.—The description of the disease is so meagre that we cannot state definitely what it is. Colds and influenza are often accompanied by a puffiness and swelling of the skin of the face. Equal parts of cayenne pepper, ginger and mustard mixed stiffly with lard and flour into a stiff dough and formed into pellets and given by dropping down the throat is recommended. If there is a bad odor coming from a nasal discharge accompanying the disease, it is likely roup. Give Epsom salts in the drinking water. Isolate diseased birds. Disinfect poultry premises. Dip the birds' heads in a five-per-cent. solution of potassium permanganate. Kill and burn those badly affected. Since your birds get over the trouble, it is likely that it is only a cold, and dampness should be avoided. Hens' heads swell with chicken pox, but ulcers appear.

CHICKEN CHOLERA.

Our hens, which are Barred Rocks, are being decimated by some disease, and are dying at the rate of half dozen per day. They first appear listless, and walk around with the head down. Their combs seem unusually red. When caught they are feverish and their feet hot. Toward the last they have diarrhea, and their droppings are yellow colored. They drop off in a few days in full flesh. How should I treat them? C. M.

Ans.—This is likely dysentery or cholera, and the death rate indicates that it is the latter. When this disease makes its appearance in a flock on free range, it is almost impossible to control it. Kill and burn all sick birds, for whether suffering from dysentery, cholera, or an acute liver trouble, their case is hopeless. Cholera is a germ disease, consequently the poultry house should be disinfected with a 10-per-cent. solution of carbolic acid, or with some good tar product. Disinfect all runs, and house the healthy birds in restricted quarters removed from the old range, and give them sufficient quantity of an acid solution of water. Give them plenty of water, and some of the best of the water, and some of the best of the water, and some of the best of the water.

Lessons in Mounting Birds Free



Yes, we will send you a lesson just as it is given by the famous Northwestern School of Taxidermy, absolutely free and prepaid. No obligations whatsoever. It teaches you something that every sportsman, hunter and nature lover should know.

LEARN TO MOUNT BIRDS AND ANIMALS

Save your fine trophies. Learn how to mount them yourself. Every hunter, sportsman and nature lover should know how to mount birds and animals. Decorate your home, your office, or your den with your beautiful trophies. Do not pay taxidermists exorbitant prices for mounting them for you. Do it yourself FREE. Or you can make big money mounting for others.

Big Money Yes, you can make easily \$50 a month during your spare time, or \$3,000 to \$5,000 a year if you go into the profession. 35,000 successful graduates, every one an enthusiastic taxidermist. We want you to enroll now. We teach you in your own home—during your spare time—by mail. Success guaranteed.

Free Book If you write at once we will send you our handsome new book on taxidermy as well as the free lesson. It tells you all about this most fascinating profession, send you a hand-ome taxidermy magazine, all free and prepaid if you write at once. No obligations whatsoever. Write NOW—before you lay aside the paper.

NORTHWESTERN SCHOOL OF TAXIDERM, 5036 Harney St., Omaha, Neb.

Brampton Jerseys

Cows and some calves for sale. Production and quality.

Bulls fit for service are getting scarce. Just a few left. Yearling heifers in calf are in great demand; 6 for sale; 6 now being bred. Brampton Stockwell the sire. A few good

B. H. BULL & SON, BRAMPTON, ONT.



Lakeview Holsteins



Count Hengerveld Fayne De Kol heads the herd, and his first twelve daughters will freshen and be tested here this coming winter. We own them all, and they are a promising lot. Count Hengerveld Fayne De Kol is sired by Pietertje Hengerveld Count De Kol, who has 96 A. R. O. daughters, five of which average 30 lbs. butter in 7 days. His dam, Grace Fayne 2nd, has a 26-lb. record, and is the dam of Grace Fayne 2nd's Homestead, who held the world's record with 35.55 lbs. butter in 7 days. This bull is at the Toronto Exhibition. Look him over and get prices on his sons. E. F. OSLER, BRONTE, ONTARIO

FAIRVIEW FARMS HERD STILL LEADS ALL OTHERS.

We own the world's champion cow, Pontiac Pet, 37.67 lbs. butter in 7 days. We have here her sire and over 50 of her sisters. We can offer you young bulls that are more closely related to her and to Pontiac Clothilde DeKol 2nd, 37.21 lbs., than you can get any place else in the world, and our prices are right. Nearly 200 head in herd. Come and look them over.

E. H. DOLLAR, (near Prescott) HEUVELTON, NEW YORK



Holsteins and Yorkshires



Sir Admiral Ormsby 4171, our main stock bull, has only had 4 daughters tested so far, and they average 26 1/2 lbs. butter in 7 days, 4-year-olds, and one holds the world's record for yearling work as a 2-year-old. We offer for sale 20 heifers in calf to Sir Admiral Ormsby; also bull calves by him and from 27 1/2-lb., 26 1/2-lb., 4-year-old and 25 1/2-lb., 4-year-old cows. Come and see the herd. No trouble to show them. Our Yorkshire hogs bred in order to supply the increasing demand for Summer Hill Yorkshires. See them at Toronto and London Exhibitions. D. C. FLAIT & SON, Hamilton, Ont. R.F.D. No. 2. Phone 2471, Hamilton.



Silver Creek Holsteins



We are now offering young stock of both sexes. The great majority of the dams in this herd have been officially tested. King Payne Segis Clothilde, whose 7 nearest dams have 7-day records that average 27 lbs., is at the head. The sire of this famous bull was King Payne Segis, whose 35 lbs. The dam of King Payne Segis Clothilde was Belle Aggie Clothilde, with 7-day record of 29.48 lbs. For fuller record see Farmer's Advocate, Dec. 1, 1910, issue.

A. H. TEEPLE, CURRIES P. O., Ont. Woodstock, G. T. R. and C. P. R. Phone Connection.

Holstein Bulls

From high-class, officially-tested cows. Ready for service. Also bull calves. R. F. HICKS, Newton Brook, Ont., York Co. Toronto Shipping Point.

THE MAPLES HOLSTEIN HERD

Everything of milking age in the Record-of-Merit. Nothing for sale at present but a choice lot of bull calves sired by King Posch De Kol. Write for prices, description and pedigree. Walburn Rivers, Folden's, Ontario

CENTRE AND HILLVIEW HOLSTEINS

Offers two June bulls, nicely marked, out of Record of Merit dams and Bonheur Statesman, younger ones. Long-Distance Telephone. P. D. Ede, Oxford Centre P.O., Woodstock, Ont.

Rich-Milking Holsteins

We have at present some choice yearling heifers, sired by Idalin's Paul Veeman and served by King Segis Pietertje; also some bull calves from 3 to 5 months old, and some 2-year-old heifers due to freshen in September, which have A. R. O. backing. Write for further particulars. B. HOLBY & SON, Belmont, Ont.

HICKORY HILL AYRSHIRES

Winners at Provincial Dairy Show for 14 years. All Ayrshires bred at Hickory Hill have the following records: Two yrs. old, 36 1/2 to 43 1/2 lbs. per day, 2nd calf, 51 to 53 1/2; 4 yrs. old and upwards, 53 1/2 to 71 1/2 lbs. per day. Special offering bull calves from dams with records from 51 1/2 to 71 1/2 lbs. per day and 1.612 to 2,006 1/2 per month, with females also for sale. Address: N. DYMENT, R. R. No. 2, Hamilton, Ont.

THE CITY VIEW HERD OF COMMERCIAL AYRSHIRES

Anything for sale. An offering several R.O.P. cows and two-year-old heifers, all from R. O. P. stock. His heifers have the quality and quantity, with large, well-placed teats and splendid udders. Write or phone. Prices reasonable. JAMES BEGG, R. R. No. 4, ST. THOMAS, ONTARIO.

STONEHOUSE AYRSHIRES

Are coming to the front wherever shown. Look out for this at the leading exhibitions. Some choice young bulls for sale, as well as cows and heifers. HECTOR GORDON, Howick, Quebec.

Ayrshires and Yorkshires

Special offerings at low prices from the Menie district. Bulls fit for service, 1911 calves. Dams of all ages: some with good official records; others, if their owners entered them, would make good records. Many females, any desired age. A few young Yorkshires. ALEX. HUME & CO., MENIE, ONT.

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.

Choice Ayrshires

Good teats, heavy producers and high test. Prices low considering quality. White Wyandottes, \$2 each. WILLIAM THORN, Trout Run Stock Farm, Lynedoch, Ont. Long-distance phone in house.

**Stop Using
Feed For Fertilizer**

Whole corn in your animals' droppings indicates that a part of the feed of even a healthy animal is wasted through non-digestion. Grinding the feed fails to save this waste, and the feeder must either let his hogs follow up the steers and eat this wasted grain or be content to realize what little he can from it as fertilizer. Saving a part of this wasted feed by *Improving Digestion* is known as "The Dr. Hess Idea," and back of it are the opinions of our ablest writers.

DR. HESS STOCK TONIC

the prescription of Dr. Hess (M. D., D. V. S.), improves digestion; it contains iron, the greatest of all blood and tissue builders, acts mildly on the kidneys, regulates the bowels, also expels worms and relieves the minor stock ailments. As proof that Dr. Hess Stock Tonic does all these things just show the formula on the label to your family physician. A poor ration well digested is better than a good ration poorly digested. Improved digestion insures more growth, more and richer milk.

Our proposition. You get of your dealer a 25 lb. pail of Dr. Hess Stock Tonic at \$2.00, or 100 lbs. at \$7.00 (smaller quantities at a slight advance). Use it all winter and spring. If it doesn't pay you and pay you well, get your money back. Every pound sold on this guarantee. If your dealer can't supply you, we will.

Free from the 1st to the 10th of each month—Dr. Hess (M. D., D. V. S.) will prescribe for your ailing animals. 96 page Veterinary Book free for the asking. Mention this paper and include 2c stamp.

DR. HESS & CLARK
Ashland, Ohio

DR. HESS POULTRY PAN-A-CE-A. A scientific fowl tonic, prepared by Dr. Hess to make hens lay more eggs. It acts beneficially on the digestive organs, keeps the egg organisms active, contains nitrates to drive out poisons and iron to build up the system. It fattens broilers quickly, helps chicks to maturity, cures minor fowl ailments. Very economical—a penny's worth feeds 30 fowls per day.

1½ lbs. 35c; 5 lbs. 85c; 12 lbs. \$1.75; 25 lb. pail \$3.50.
Duty paid.

INSTANT LOUSE KILLER KILLS LICE

Farnham Farm Oxfords and Hampshire Downs

We are offering very reasonably a number of first-class yearling and ram lambs, by our imported champion ram; also filly ewes of both breeds. Long-distance phone in house; ask Guelph for 152, two rings. **HENRY ARKELL & SON, ARKELL, ONTARIO**

Shropshire Sheep, Shire Horses and Poultry. I have bred very many winners in Shropshires, and never had a better lot of both sexes for sale. Order early. Also a big quality shire filly and White Wyandotte poultry. **W. D. MONKMAN Bond Head, Ont.**
Phone connection.

Hampshire Pigs

Get acquainted with the best bacon hog in existence. Both sexes for sale, bred from imported stock. Write for prices.

J. H. RUTHERFORD
Caledon East, Ont.

Box 62 Long-Distance Phone

Maple Grove Yorkshires ARE EQUAL TO THE BEST.

Present offering: Twenty-five sows bred to farrow from Aug. to Oct. All first-class, bred to No. 1 quality boars. All big, roomy, growthy stock, and ranging from six months to two years old. Eight young boars fit for use; choice long fellows of excellent breeding, and younger pigs of various ages. Pairs not related. Our prices will suit the average farmer, but are consistent with the best quality. Stock shipped C. O. D. and on approval. Correspondence and personal inspection invited. Long-distance phone via St. Thomas.

H. S. McDIARMID, FINGAL, ONTARIO.
Shedden Station, P. M. and M. C. R.

Hillcrest Tamworths

I ship to all parts of Canada and United States. Stock Boars, Bred Sows, and Exhibition Stock. Bell phone. **Herbert German, St. George, Ont.**

A LIFE-LIKE TALE.

Mother—"Johnny, you said you'd been to Sunday school."

Johnny (with a far-away look)—"Yes, mamma."

Mother—"How does it happen that your hands smell of fish?"

Johnny—"I carried home the Sunday-school paper, and the outside page is all about Jonah and the whale."



Maple Villa

Oxford Downs and Yorkshires

Are ideal in quality and type. Present offering is a grand lot of ram lambs for flock headers, also a number of shearing ewes and ewe lambs, sired by imp. Hamptonian 22nd, who is also for sale. Yorkshires of both sexes and all ages. Right good ones. Satisfaction assured.

J. A. CERSWELL

Bond Head P. O., Ont.

Bradford or Beeton Station.

Southdown Rams—Select your flock-header early. Come and see my home-bred stock.

Angus Cattle—Buy an Angus bull to produce steers that feed easily and top the market.

Collies that win at the shows and make excellent workers.

ROBT. McEWEN, Byron, Ont.

SHROPSHIRE BARGAINS AT FAIRVIEW

Choice shearing rams sired by grand champions, and out of the best of dams. We have in the lot flock headers and showing propositions. We guarantee them to be as described.

See representatives at Toronto's Canadian National.

J. & D. J. CAMPBELL, FAIRVIEW FARM, WOODVILLE, ONTARIO

Shropshires and Cotswolds

I am now offering for sale 25 shearing Shropshire rams and 15 shearing ewes, nearly all from imported ewes and ram. Also the best lot of lambs I ever raised. Am fitting some of all ages for showing. Prices very reasonable.

JOHN MILLER, Brougham, Ont.
Claremont Stn., C. P. R.



CATTLE and SHEEP LABELS

Metal ear labels with owner's name, address and any numbers required.

They are inexpensive, simple and practical. The greatest thing for stock. Do not neglect to send for free circular and sample. Send your name and address to-day.

F. G. JAMES, Bowmanville, Ont.

American Shropshire Registry Association

Has the largest membership of any live-stock association in the world, and is steadily growing. Life membership \$5.00, no yearly dues. Write for information.

J. M. WADE, SECRETARY, LA FAYETTE, INDIANA



Monkland Yorkshires

I am making a special offering of 50 young bred sows. They will average 200 pounds in weight, and are from 6 to 7 months of age. An exceptionally choice lot, full of type and quality; also a limited number of young boars.

MATTHEW WILSON, FERGUS, ONTARIO

Newcastle Tamworths and Shorthorns

For sale: Choice young sows bred and ready to breed. Boars ready for service; nice things, 2 to 4 months, by imp. boar. Dam by Colwill's Choice. Canada champion boar, 1901-2-3-5. Two splendid young Shorthorn bulls and six heifers—bred. Prices right. Bell phone.

A. A. COLWILL, NEWCASTLE, ONTARIO

Willowdale Berkshires.

For sale: Nice lot of 5 months' sows, one 5 months' boar. Eggs from my famous flock of R. C. R. I. Reds, \$1 per 13. Express prepaid on 5 settings or more. Phone 52, Milton.

J. J. WILSON, Importer and Breeder, Milton, Ontario, C. P. R. and G. T. R.

PINE GROVE BERKSHIRES

Sold out of young boars. Have a few young sows three and four months old. Price right for quick sale. Milton, C. P. R.

W. W. Brownridge, Ashgrove, Ont.

Duroc - Jersey Swine.



Largest herd in Canada. 100 pigs ready to ship. Pairs and trios not akin; also a few sows ready to breed. Bell phone at the house.

MAC CAMPBELL & SONS, NORTHWOOD, ONT.

ELMWOOD STOCK FARM offers Ohio Improved Chester White Pigs. Largest Choice lot, 6 to 8 weeks old. Pairs furnished not akin. Express prepaid. Pedigrees and safe delivery guaranteed **E. D. George & Sons, Putnam, 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. Also Red Cap cockerels and pullets. **W. E. WRIGHT, Glanworth P. O., Ont.**

QUESTIONS AND ANSWERS Miscellaneous.

EVENING PRIMROSE.

I am sending you a weed in a box. Could you please let me know in next issue what it is? Have a field rather thick with it, which I plowed out of sod a year ago. Field had not been plowed for a number of years, and it was in pasture. Sowed it to peas a year ago last spring, and then disked it in the fall and sowed wheat on it, and this weed with a yellow flower is coming up quite thick now.

P. C.

Ans.—The weed is common evening primrose (*Oenothera biennis*). It is a tall biennial which occurs throughout the country, and can be recognized by its tall, branching habit, its soft, downy, lance-shaped leaves, and its large, showy, yellow flowers, which open in the evening. This weed only grows into a rosette of leaves the first year, consequently it appears only in crops sown in the autumn or on stubble. It sometimes occurs in thin clover fields or meadows. In clover fields the rosettes should be spudded out, or cut off below the crown the first season. The tall, flowering plants should be either cut off below the surface or pulled out before the seeds ripen. On stubble land, to be sown to grain, the plants should be destroyed by cultivation. This weed will not stand cultivation, and if you do not allow it to seed, the plowing of the field this fall, and the fall and spring cultivation, will likely eradicate it. It is not troublesome where a regular rotation and clean cultivation are followed.

WHITE GRUBS—SAWDUST FOR FERTILIZER—CEDAR HEDGE—DUTY ON FARM IMPLEMENTS.

1. We have a field which has been seeded down for four years, and last fall was plowed, and wheat put in one half and corn in the other. The seed came up, but did not do well, and some died off, and, on looking at the roots, found numerous large white grubs. The land is clay loam, and faces the south. They are also in the pasture, and are killing the grass. Please give some way to destroy them.

2. We have a large pit of sawdust on our farm. I would like to know if it is a good fertilizer? It is about fifteen years old.

3. When is the proper time to trim a cedar hedge?

4. What is the duty on farm implements taken from the United States to Canada, and what will be the duty if reciprocity carries?

D. P.

Ans.—1. The insect is the white grub. These grubs are larvae of the May beetles or June bugs, so called from their great abundance in June. The eggs are laid in the ground, and require three years to mature. There are no remedies for white grubs in most crops, but as the eggs are laid in grass lands, it is important that sod not be left down too long, and that grass land which has been seeded for a long time not be planted to corn or potatoes. A short rotation of crops is advisable. Hogs pasturing on rape sown on the ground, the first year out of sod, will often destroy many, and poultry following the plow get many of them. Clover is seldom attacked by these grubs, consequently it is a good crop for infested land.

2. Sawdust would be little use as a fertilizer, but if used as bedding to soak up the liquid animal excrement, it might be applied to the soil along with manure to good advantage.

3. Cedar hedges should be pruned and trimmed in June.

4. Canada's general duty is 20 per cent. on plows, harrows, drills and planters, horse rakes, cultivators, threshing machines, manure spreaders, weeders and windmills; 25 per cent. on wagons, hay loaders, potato diggers, fanning mills, feed cutters, hay tedders and rollers, and 17½ per cent. on harvesters and mowers. The proposed reduction by Canada under reciprocity is 2½ per cent. on wagons, reapers and mowers, and 5 per cent. on the others mentioned, with the exception of weeders, windmills and rollers.

I Cured My Rupture I Will Show You How To Cure Yours FREE!

I was helpless and bed-ridden for years from a double rupture. No truss could hold. Doctors said I would die if not operated on. I fooled them all and cured myself by a simple discovery. I will send the cure free by mail if you write for it. It cured me and has since cured thousands. It will cure you.

Fill out the coupon below and mail it to me today

Free Rupture-Cure Coupon
CAPT. W. A. COLLINGS,
Box 60 Watertown, N. Y.
 Dear Sir:—Please send me free of all cost your New Discovery for the Cure of Rupture.
 Name.....
 Address.....



Digging asphalt from Trinidad Lake

A roof is only as good as its waterproofing. Knowing this, will you buy the covering for your roof on its "looks" alone, and not know what it is made of?

Genasco

the Trinidad-Lake-Asphalt Roofing

is waterproofed entirely with natural asphalt. In Trinidad Lake this asphalt has resisted blazing sun and terrific storms for hundreds of years. It has natural oils that give it lasting life in a roof despite the buffeting of rain, snow, sun, wind, heat, cold, and fire.

Man has tried to make lasting waterproofer—and always failed. Ordinary ready roofings show you what happens. They are made of mysterious "compositions" or coal tar; and they soon crack, break, leak, and go to pieces. Yet as for looks, they are mighty good imitations.

The life and backbone of Genasco is Trinidad Lake Asphalt—the natural everlasting waterproofer—and that makes Genasco last.

Genasco is made with mineral and smooth surfaces. Guaranteed, of course.

The Kant-leak Kleet waterproofs the seams of roofing thoroughly without the use of smeary unsightly cement, avoids nail-leaks, and gives the roof an attractive appearance.

Ask your dealer for Genasco Roofing, with Kant-leak Kleet packed in the roll. Write us for the Good Roof Guide Book and samples.

GENASCO
 The Barber Asphalt Paving Company
 Largest producers of asphalt, and largest manufacturers of ready roofing in the world.
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TRADE TOPIC. EXCURSION TO WESTERN CANADA.

The Grand Trunk Railway System announce that on Tuesday, August 22nd, September 5th and 19th, 1911, Home-seekers' Excursions will be run from all stations in Ontario and Quebec to Western Canada, via Chicago and Duluth, or via Chicago, St. Paul and Minneapolis, at reduced round trip fares.

The well-known double-track line of the Grand Trunk from the East to Chicago appeals to the traveller, and with the superior train service that is offered by this line, including the famous "International Limited" from Montreal daily at 9.00 a. m., which is the finest and fastest train in Canada, many passengers will be attracted this way. The route via Chicago is a most interesting one, taking passengers through the principal cities and towns in Canada and in the States of Michigan and Indiana. In addition to this a choice of seven lines between Chicago and St. Paul and Minneapolis is offered.

Owing to the great number of Canadians who reside in Chicago, St. Paul, Minneapolis, Duluth and other cities en route, there is no doubt that the Grand Trunk will find many patrons who will take advantage of the opportunity thus afforded them for a brief visit at the stations with their friends.

Canadian citizens are exempt from so-called immigration examination, and there is no detention at any point.

Baggage is carried through the United States in bond without requiring any special attention on the part of the passenger. Inspection is not necessary at any of the points at the border.

Another feature that will appeal to the homeseeker is the comfortable transfer at points like Chicago, St. Paul and Duluth into freshly ventilated clean cars, avoiding the necessity of travelling a long distance in the same car.

In addition to the above routes, the sale of tickets is also authorized via Sarnia, and the Northern Navigation Company's magnificent steamers across Lake Huron and Lake Superior.

For further particulars, apply to any Agent of the Grand Trunk Railway System, or write to Mr. J. Quinlan, District Passenger Agent, Bonaventure Station, Montreal, or Mr. A. E. Duff, District Passenger Agent, Union Station, Toronto.

SERIOUS BLUNDER.

Newport was aroused last month over a story that J. Pierpont Morgan told at a luncheon at the Fishing Club.

"They talk of the high cost of living," Mr. Morgan said, "but it's just as bad abroad. You all know what Trouville is like in the season."

"An American took in Trouville's grande semaine last year. When his bill was sent up he paused in his breakfast and studied it with a sarcastic smile. Then he sent for the hotel clerk."

"See here," he said, "you've made a mistake in this bill."

"Oh, no, monsieur, Oh, no!" cried the clerk.

"Yes you have," said the American, and with a sneer he pointed to the total. "I've got more money than that," he said.—St. Paul Dispatch.

Richard Watson Gilder has a dry wit of his own. He once received a call from a young woman who wished to secure material for an article of 3,000 words on "Young Women in Literature."

"It was a fetching subject, full of meat," explained the young woman afterward, "and I saw not only 3,000 words in the story, but at least 6,000. But I never got any further than the first question. Mr. Gilder's answer took the very life out of me. I asked him: 'Now, Mr. Gilder, what would you say was the first, the chief, the all-essential requisite for a young woman entering the literary field?' I waited with bated breath, when he answered: 'Postage stamps.'"

"Quite a remarkable thing happened at the banquet last night."

"Did somebody tell a story that was new?"

"No; the stories were all old, but one of the speakers who said he had nothing to say, sat down immediately after saying it."

You need not be skilled in the ways of finance to know that the Four-Per-Cent. Debentures of this Company are an absolutely safe investment. The Company's assets assure the investor of the stability of the

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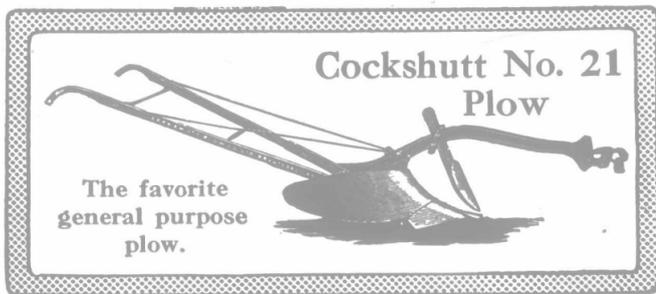
Pulverizes the manure three times to only once for other machines. Spreads 5 to 7 feet wide; spreads evenly; has less weight; lighter draft; no cog or bevel gears; less breakages; low down, easy loading; no choking or bunching. Superior in every way to any spreader in the market. Fully guaranteed by the

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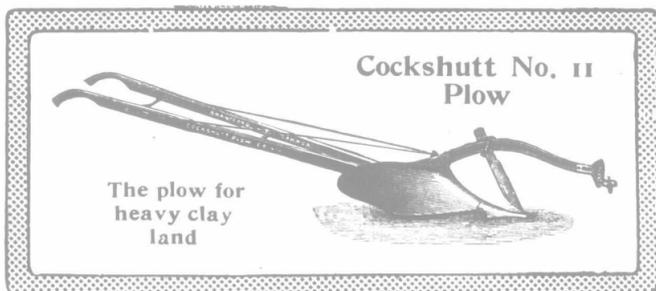
The Name "COCKSHUTT" on a Plow Means Full Value—Good Work—Entire Satisfaction—All the Time



You often need a plow which can turn to almost any kind of work. In other words, a general-purpose plow. The "Cockshutt" No. 21 is probably the best known and most used of any Canadian-made walking plow. It is easily held and controlled by the long handles. The mold board is so shaped that stones do not harm or throw it out. It cuts evenly and well from 10-12 inches wide and from 4-8 inches deep.

This is a good all-round plow for any kind of soil.

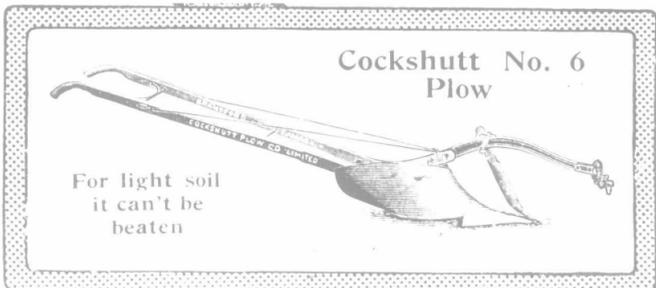
There is a "COCKSHUTT" Plow for Every Kind of Land



The No. 11 Plow is built specially for clay land. It has been on the market the past three seasons, and wherever it has been introduced has given thorough satisfaction. It will cut a clean furrow 5 to 8 inches deep and 6 to 9 inches wide, and on account of fairly lengthy handles is easily controlled. This plow is strongly built, and the steel board will clean nicely. It is fitted when shipped with chilled share, extra share being also supplied.

Big value and Cockshutt Quality are built into this plow.

120 Different Styles Make Selection Easy and Sure



No. 6 is essentially a light work plow. In sandy soil or light loam you save your horses and yourself, and at the same time get better results than with a heavy plow. It is light of draft and at the same time turns a good, clean, even furrow. It is always shipped with steel board, chilled share, colter, extra share and wrench.

Here is a handy, easily-used plow that should be on every farm, large or small.

Get the "COCKSHUTT" Catalogue. You Will Save "Regrets"

Some men when they buy a plow do not take into consideration the fact that different soils need different plows if the work is to be done right. You should not invest a cent in any implement until you have made a careful study of your needs and the conditions under which the implements will be used.

Every Cockshutt plow is the result of years of careful study. They are RIGHT in every particular. We are sure of this. Every plow must pass a severe test before it is allowed to leave our factory. Do not take the first plow offered, but—

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