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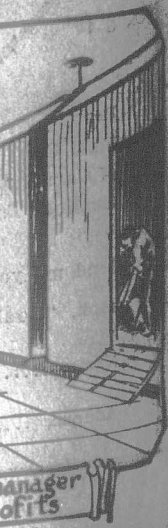
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AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.

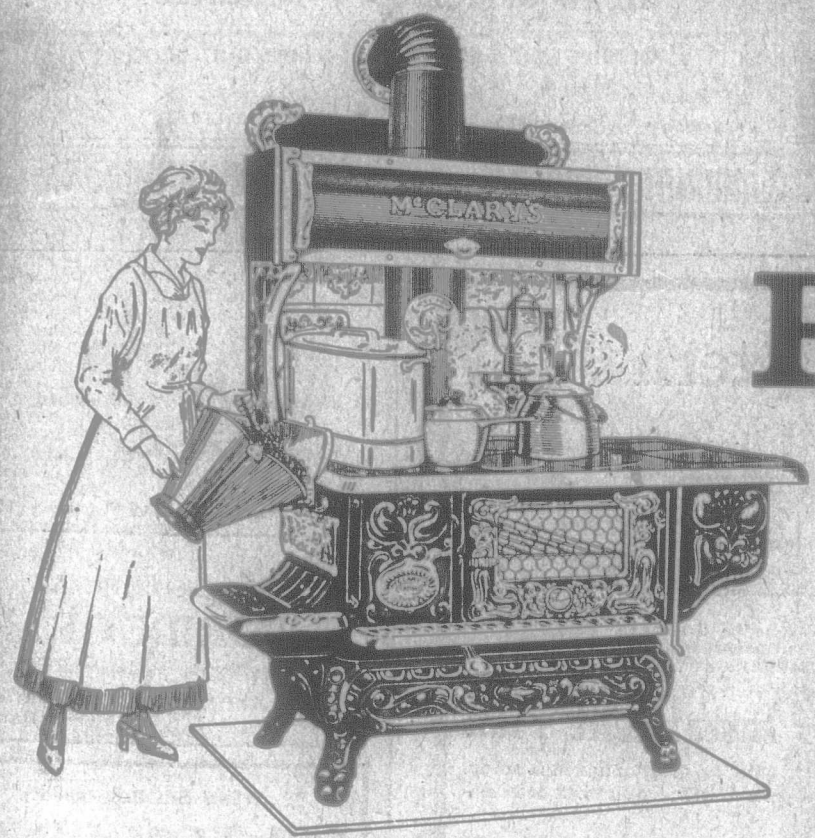
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Vol. LH.

LONDON, ONTARIO, OCTOBER 4, 1917.

No. 1306

A Great Help on a Busy Day



McClary's PANDORA RANGE

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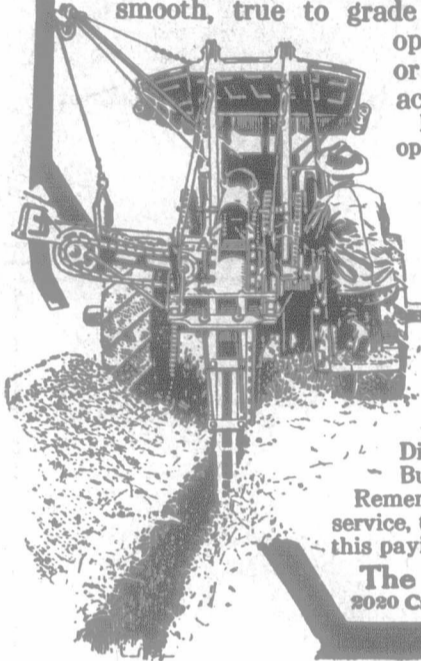
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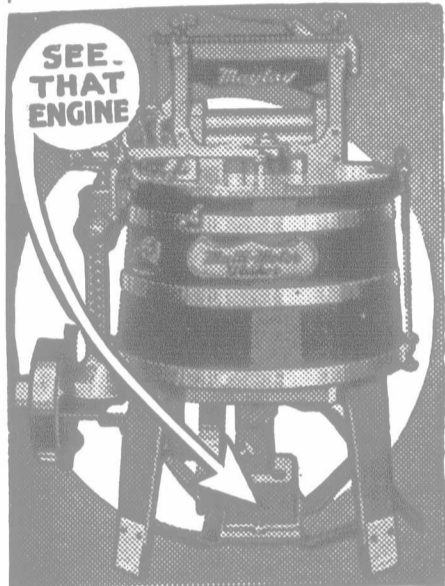
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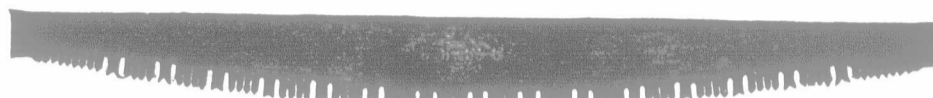
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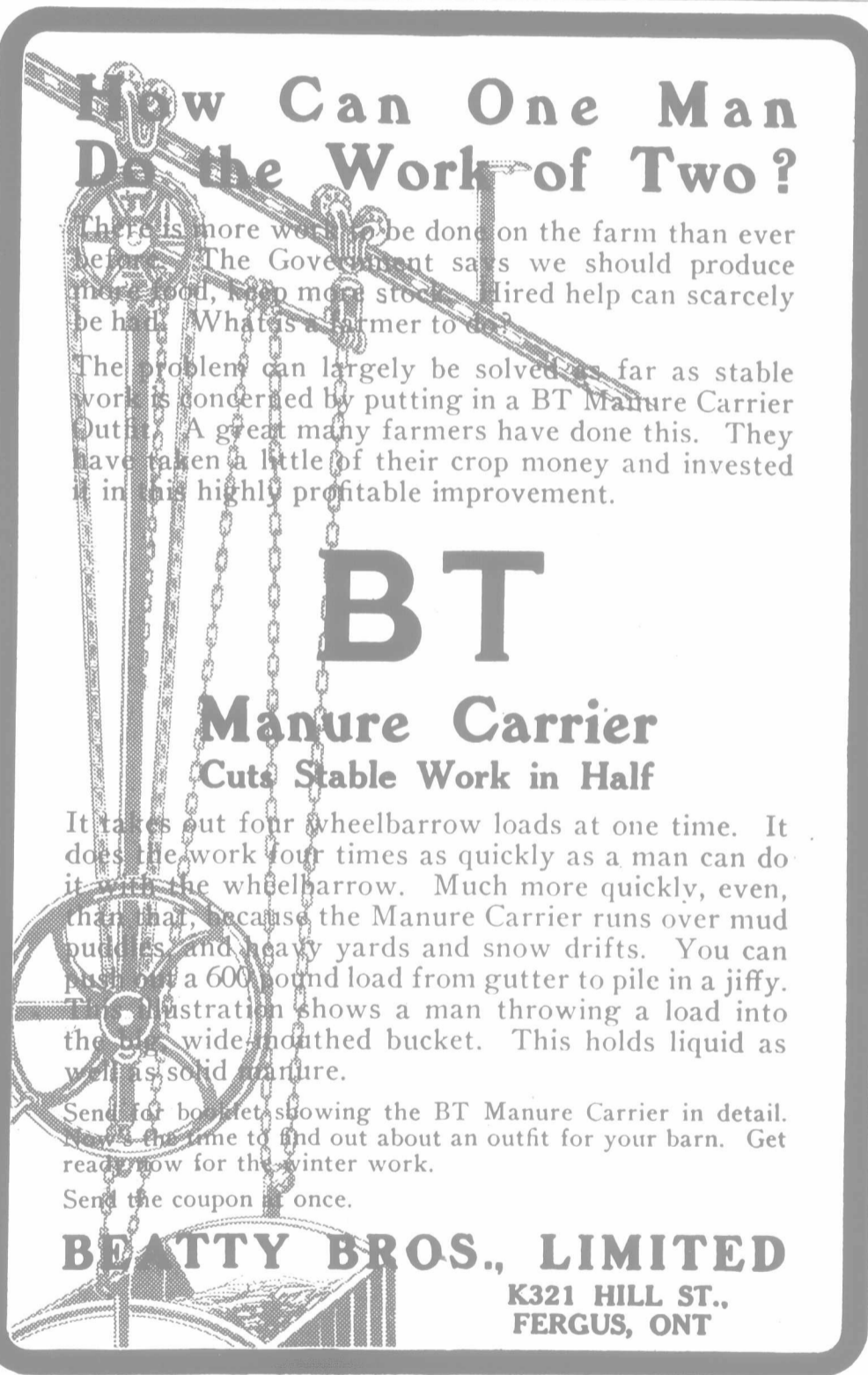
It takes out four wheelbarrow loads at one time. It does the work four times as quickly as a man can do it with the wheelbarrow. Much more quickly, even, than that, because the Manure Carrier runs over mud puddles and heavy yards and snow drifts. You can push a 600 pound load from gutter to pile in a jiffy. The illustration shows a man throwing a load into the 36" wide-mouthed bucket. This holds liquid as well as solid manure.

Send for booklet showing the BT Manure Carrier in detail. It's the time to find out about an outfit for your barn. Get ready now for the winter work.

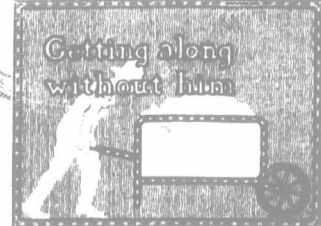
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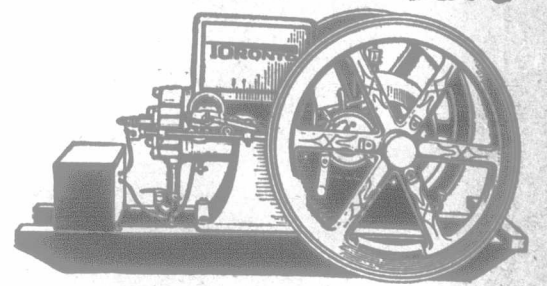
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This year, above all others, every hour of day-light and every ounce of strength should be used to the very best advantage. A TORONTO Engine will help you to do this! By handling so much of your heavy work it will go a long way toward making up for the shortage of help.

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They are so simple—so strongly built—so lively in starting—so steady running—so easily regulated—that you can count on them every time. No exasperating hold-ups while you try to figure out what's the matter! The TORONTO Engine is always

ready, and fairly eats up the work.

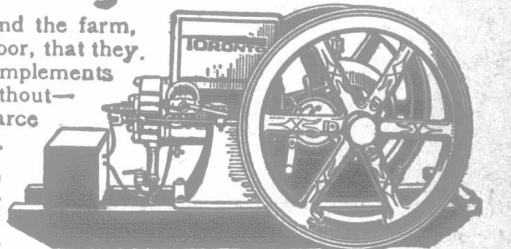
Made in five sizes—1 3/4 to 8 H.P.—on skids or trucks—to handle any kind of farm work. Run on gasolines, kerosene or natural gas, with battery or magneto ignition. Write for our Catalogue giving full particulars.

We also manufacture Windmills, Pumps, Silos, Stable Equipment, etc.

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LONDON, ONTARIO, OCTOBER 4, 1917.

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EDITORIAL.

For fine weather September took the cake.

Push your business or your business will push you.

A safe place to invest your money at good interest is in Government war bonds.

As conspirators and intriguers the Germans are revealed from month to month as the top of the dirty heap.

The Food Controller has promised to either set the price of foodstuffs or tell the people the reason why he cannot do it.

The tractor is coming successfully through the period of evolution necessary to its highest efficiency on the Eastern Canada farm.

The Prussian must be disarmed before any others will seriously consider world disarmament. None will trust the baby killers.

We should have a long, protracted spell of Indian summer this year, because there hasn't been any too much of the regular kind.

At a big fair in the Maritime Provinces a certain space generally taken by a firm displaying all kinds of liquors was this year filled with wholesome and nutritious bread and pastry flour. No one will say the change is for the worse.

Scarcely a week passes but we read of some child's death from burns caused by playing with matches, and often indeed is considerable property loss experienced. A safe place for the matches should be the motto of all fathers and mothers. Carelessness or thoughtlessness is costly.

The large number of automobile accidents during the season now drawing to a close indicates too much careless and reckless driving. Human life is too precious to be so endangered and destroyed without reason. The speed fiend and careless or incompetent drivers are a menace to the public.

After visiting your annual fall fair are you quite sure that as at present organized it has any reason for existing? If you are it has been a good fair; if, on the other hand, you are not satisfied suggest improvements and help carry them out. Many country and township fairs seem to have settled into an old rut, and they need a little sensible "booster's tonic."

The people of Canada have a duty to perform not only in the maintenance of the military strength of the country at the front through a steady flow of men, munitions, food, comforts, money, etc., but also to the returned men who have done their bit and come back to our shores. They are deserving of the best Canada can offer and are worthy of every consideration and kindness.

It used to be "money makes the mare go," but this

The Tractor Outlook.

Last week's issue contained a report of the third Eastern Canada Tractor Demonstration recently held near Toronto. At the first Demonstration only a very few different types were shown. At the second, held last year, eight tractors showed their efficiency; but this year there were around thirty out, and another demonstration will be held at the time of the Provincial Plowing Match, late in October.

There are four main points which the Ontario farmer considers in estimating the value of a tractor to him, viz., cost, size, adaptability, durability. The Eastern Canada farmer has, as a rule, a small farm as acreages are understood in tractor districts. He requires a small engine at the lowest possible cost and yet with power enough to make it adaptable to his mixed farming conditions, and with stability enough to ensure its lasting for a number of years. Moderate-priced, handy, all-round, durable tractors will sell in Eastern Canada where power on the farm is necessary for grinding, cutting, farming, pumping and other operations as well as for cultivation purposes. The tractor's real value in this part of the Dominion is on the belt. The real reason for the rapidly-growing interest in it is to help the farmer do the work around his barns and then to help out of a pinch in field work. The best types of small tractors are designed to do both. The problem for the tractor manufacturer is to get the machine small enough to reach the maximum in convenience, strong enough to stand the wear and tear, and with sufficient power to plow, cultivate, run a chopper, a cutting box, a circular saw and so on, and all at a price not too high for the average farmer. The ideal has not been attained; improvements are noticeable; but great advancement is being made. Remember that power on the belt is a first essential.

The Price of Milk.

Elsewhere in this issue is published an article on the milk question, written by the President of a producers' association near Toronto and, some of his arguments as well as some of those of people who do not understand the situation the producer of milk in quantity is called upon to face, will bear elaboration. Figures given by our correspondent show that while the feeds necessary in winter milk production have advanced 90 per cent. in price during the last five years, milk at \$2 per eight-gallon can has only advanced 25 per cent., and he goes on to show that even the winter price of \$2.50 per eight-gallon can asked would not leave a fair margin of profit to the producer.

Milk is absolutely essential to the welfare of the race. It must be produced, and all should remember that unless a reasonable profit is forthcoming on its production dairy farmers will find other means of making a livelihood from their farms. Over in Britain, food control has so worked against the milk producer that difficulty is experienced in getting the necessary quantities of the lacteal fluid. The race cannot be reared without it so the supply should be safeguarded. A consideration of the situation by those who understand the cost and difficulties of present-day dairying will reveal the fact that the dairymen are not asking exorbitant prices in \$2.50 per eight-gallon can. What does it cost to feed a dairy cow per year at present feed prices? We are safely within the mark when we say anywhere from \$100 to \$150. In 1915 the O. A. C. herd of 34 head were fed at an average cost of around

around 400 gallons per year. At the \$2 price for an eight-gallon can she would yield exactly \$100. But it cost 20 cents per can to deliver the milk, or \$10, so that the producer if he figured his feed at market price and counted nothing for his labor, interest on investment, or depreciation, would be out of pocket \$10 on his average cow, to say nothing of labor involved. His only hope is to breed and feed cows which are much better than average producers, but this cannot be accomplished at once. Even at the \$2.50 price per eight-gallon can, the average cow would only return, gross, \$125 or \$115 after delivery charges were paid—little more than pay for her feed if it required only \$100 to feed her, which we doubt. The only chance the farmer has is to breed up to better record cows in order to get market price for the grain and feed produced on the farm. It costs money to buy them and they are not raised for nothing. One of the leading experiment stations in the United States figures that it costs \$100 to raise a heifer up to the age of milk production. The milk of the cow must pay off this debt. Keeping all this in mind it is easily seen that the dairy farmer must get a fair price else he will sell his cows and then where will the city milk supply come from? At the present time buyers from New York State are said to be paying \$3 per hundred for milk at the farms in Eastern Ontario, an equivalent of \$2.67 1/2 per eight-gallon can delivered. An agitation against producers of milk in the State of New York and carried on for some time had the effect of driving producers out of the business, hence the demand from that direction for Ontario milk. A continuance of such an agitation here without understanding may soon have the same effect upon the Ontario milk producer.

The producers give their reasons for the advance in price, and they are sound. (1) Increase in cost of feed, which has been shown to have advanced ninety per cent. in five years, whereas milk has advanced but twenty-five per cent. (2) Labor, which has advanced 100 per cent. (3) Milk cows, eighty per cent. (4) Cartage, which has gone up five to eight cents per eight-gallon can. (5) The utensils and machinery used in the business, as well as the high cost of living, which milk producers feel as acutely as any other class in the community. Farmers have responded as best they could to all appeals for increased production and extra effort to win the war, and of them all the dairy farmer works hardest and longest hours. He knows that the race must have milk and he is willing to do his best to produce it, but it is disheartening when he must continually bear with the snubs and ridiculous arguments of those who know nothing of the problem of milk production. Milk should be worth \$2.50 per eight-gallon can this winter with feed so high, or it isn't worth the producer's while to put in long days feeding and milking cows.

One point more; good, clean, pure milk is just about the cheapest and most wholesome food procurable even at the price stated, and should be used freely wherever procurable in the interests of economy and thrift.

Everything the public is called upon to buy is up in price, and it is strange how people blame the farmer and desire to penalize him for everything. Fashionable folks will pay \$12 or \$15 for a pair of shoes they formerly could have bought for less than half the price, and they will not grumble half so much as they will if a farmer asks them a fair price for a peck of potatoes. Everything has advanced and the producer living on the farm

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

Published weekly by
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Agents for "The Farmer's Advocate and Home Journal,"
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Make the Farm Name Your Trade Mark.

Every progressive manufacturing concern has a registered trade mark for its product. Every up-to-date business has a name and is known far and wide by that name. So should it be with the business of farming. Every farm should have an appropriate name and the products of the place should have a reputation on the market, established through the continual use of the name and the putting out of a high-quality product, a credit to the farm whose name it carries.

Name the farm. Once the name has been chosen take a pride in its use and put it on all products. No farmer would care to see his name on poor products. The use of the farm name will increase interest in the farm and will work for uniformity and high quality of product. Make the farm name your trade mark and see to it that all goods bearing it are worthy of the mark. This will increase the satisfaction accruing from good work. It will also, eventually, add considerably to the financial returns of the farm, because greater interest means bigger yields of better crops and higher net returns. The farm name will soon mean something to purchasers; it will, from the beginning, mean a great deal to the owner. Every farm should have a name and the products should not sully it. A good motto—a name for every farm.

Nature's Diary.

BY A. B. KLUGH, M. A.

In the marsh we find many interesting plants, most of them of very different types from those we find in drier ground. One of these is the Sweet Flag, (*Acorus calamus*), shown in Fig. 1. This plant is from two to six feet in height, with long leaves an inch or less in width and sharp-edged and sharp-pointed. The scapes, that is the stems which bear the flower-heads, are triangular, and above the flower-head they have a leaf-like continuation termed the spathe. The spadix (flower-head) is cylindrical and is densely covered with perfect flowers. These minute flowers have six sepals, six stamens and a three or four-celled ovary. The fruits developed from these flowers are few-seeded, somewhat gelatinous, berries. The underground part of the plant is a very long horizontal rootstock with numerous branches. This rootstock when dried yields the drug

Calamus and sells for from ten to sixteen cents per pound.

Another quaint plant of the marsh is the Great Bur-reed, *Sparganium eurycarpum*. The stem of this species is from three to eight feet in height. The leaves are long and grass-like, slightly keeled beneath, the lowest being from three to four feet in length. The flowers are of two kinds the staminate being borne above and the pistillate beneath. The staminate heads are numerous and contain many stamens radiating outwards from the centre of the head. The pistillate heads are from two to four in number and when in fruit are about an inch and a half in diameter. It is these fruiting heads with their bur-like appearance which give the plant its common name. The underground part of the plant is a creeping rootstock, with numerous fibrous roots.

The Great Bur-reed has an extensive range in Canada, being found from Newfoundland to British Columbia. Well-known plants of the marsh are the Cat-tails, of which we have two species in Canada. In these plants the brown, velvety, cylindrical objects near the top of the stems are the spikes of pistillate flowers while the fuzzy, tapering spikes above consist of the staminate flowers. The whitish silky fluff which is seen when the pistillate spikes become mature is the so-called "perianth" of the pistillate flowers, that is the portion of the flowers which corresponds to the corolla in plants higher up in the scale of vegetable life.



Fig. 1—Sweet Flag.

Fig. 2—Great Bur-reed.

In the Broad-leaved Cat-tail the stems are from four to eight feet in height, the pistillate spikes are dark brown, the staminate spikes are contiguous to the pistillate, the leaves are from three-quarters of an inch to an inch wide and the pollen is four-grained. This species occurs abundantly in marshes throughout Canada, and is also found in Europe and Asia.

In the Narrow-leaved Cat-tail the stems are from five to ten feet in height, the pistillate spikes are light brown and less in diameter than those of the preceding species, the staminate spikes are separated by a space from the pistillate, the leaves are about half an inch in width, and the pollen is in simple grains. This species is common in marshes near the Atlantic coast, but is of rarer occurrence inland, though in some localities, as in the vicinity of Kingston, it is abundant.

Be Moderate in All Things.

BY ALLAN MCDIARMID.

Some investigations that have been made lately into the growth of plants and animals go to show that there is a limit to the extent to which they may be safely cultivated or developed. It seems that over-cultivation is not in line with Nature's methods, and if persisted in will lead to the extinction of the race, whether of plants or animals. Old age and death are common to the race as well as to the individual. We have an example of this in the potato. Nature has prevented it from any longer developing seed. The "potato apples," as we used to call them, no longer appear on the plants, and the reason is simply that the race is running out. It will continue to propagate its kind for some time by means of the tubers, but here Nature is again at work by means of her agents, the microbes, and what is known as "potato blight" with the consequent rotting of the tubers will, in the end, put the potato into the "extinct species" class, unless there is some return to more natural conditions of growth. The potato has been hoed and fertilized into "race suicide." Had it continued to grow in its original wild and uncultivated state, producing small quantities of plum-sized tubers, it might have gone on indefinitely developing both seed and tuber.

In the animal kingdom we have further examples of the working out of this law. The Newfoundland dog and the Morgan horse were at one time common enough, but to-day specimens of these breeds are few and far between. The reason is simply over-development.

It is the same with the human race. The civilized countries have a very rapidly falling birth rate, and in such artificial centres as upper-class New York, for instance, any increase in population is made up from outside. France is another country in which this pro-

cess of Nature has been visibly at work. For several years the death rate there has exceeded the birth rate. Commerce and all the arts and sciences flourished, but the process of weeding out went on.

It seems certain that the logical end of cultivation is the disappearance of the race, and the higher the culture the sooner will be the end. If the civilized nations of the world do not get back to more natural ways of living it won't be long until the less cultured races will be taking their place. They will all go the way of the potato, and for the same reason.

But we don't have to go farther than our own farms for instances of this tendency on the part of Nature to eliminate the over-developed. Take the case of some pure-bred horses. According to my experience and observation they are delicate in a majority of cases and subject to about all the ills that horse flesh is heir to. Failure to breed and abortion are far too common among them to suit the ideas of the practical horse dealer. What is the reason? Simply that they have been bred for generations in unnatural conditions and have been stabled and pampered and insufficiently exercised until the microbes that Nature always has ready in such circumstances, find them an easy prey, and our trouble with them begins.

Highly-fed and heavy-producing cows furnish us with another example. When a cow is developed to the point where she gives enough milk to feed three or maybe four calves the stockman may begin to look for trouble. The same breeding troubles are met with as in the case of horses. One of the highest-producing cows that has ever been developed in this country is, it is feared at present, going to prove a non-breeder. What is probably the cause? Is it not likely to be the unnatural forcing that was necessary to put her at the head of the breed? Udder troubles are becoming increasingly common, and the cow with a slack quarter is proverbially one that has been a great producer in the past. Again, the penalty paid for over-development.

Another example of the working out of this universal law will be noticed by the breeder of pigs. How often it happens that the mothers eat the young pigs unless great precautions are taken. And this almost invariably happens when the mother has been over-fed or has been living under unnatural conditions, such as a warm pen where sufficient exercise was impossible. And when the young pigs do survive and grow up under these conditions they are very liable to the attack of the cholera microbe which kills off so many thousand hogs every year on this continent. Why does the cholera not kill off the wild pigs? It is a fact that "Nature keeps the cholera microbe for just as definite a purpose as we keep our pigs."

The over-stimulation of a plant or an animal has a two-fold effect. It produces fine specimens of root or fruit, as the case may be, where a plant is under cultivation; and in the case of the animal, high production or abnormally large growth is the result. But this stimulation creates, at the same time, an extremely favorable ground for the propagation of microbes, which in the end destroy the plant or animal.

These being scientific facts the moral for us farmers should not be hard to read. It simply means that we should get nearer to Nature and take her as our guide in our dealings with our live stock, more than we do. Over-development, forcing anything to an extreme, has a tendency to defeat its object. Many of our methods illustrate the old proverb which says that "much wants more and loses all." Moderation in all things is a pretty safe rule to follow.

Where plants are concerned I am aware that we cannot do very much to prevent their "running out," unless it be to follow Nature's plan again, and change them from field to field, and also get new seed occasionally. Under natural conditions this seed movement is taking place all the time, through the agency of birds, the wind, and in many other ways.

But the way seems to be clear in so far as our dealings with our live stock are concerned. Give them fresh air and exercise, give them natural foods in so far as it is possible, and above all, don't try to force them to do or be something that Nature never intended. They way lies shipwreck.

THE HORSE.

Diseases of the Respiratory Organs—V.

Congestion of the Lungs.

Congestion of the lungs—Pulmonary apoplexy—consists in engorgement of the functional blood vessels of the lungs, usually due to a weakened condition of the heart, from over-exhaustion, especially when the animal is not in condition, and is occasionally due to exposure to cold. It is also occasionally seen during the progress of many diseases, as inflammation of the various organs, as the feet, joints, intestines, lungs, in heart affections, and various prostrating diseases. The most common cause is subjecting a horse to severe exercise when he is not "in condition," or is taxed beyond his strength. In order to bring a horse into "condition" for severe exertion, it is necessary that he be gradually prepared. Congestion may also result from actual want of air in horses that are housed in badly ventilated stables.

Symptoms.—The symptoms are usually very distressing. The animal stands with outstretched legs and seems to "fight for breath." The nostrils will open and close quickly, the flanks heave rapidly,

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the eyes are blood-shot and wild in appearance, else sunken and dull; the legs and ears are cold, and cold sweats bedew the body; the pulse is small and indistinct, and usually very frequent, perhaps 100 or more per minute in extreme cases; the heart's action is tumultuous but weak. In some cases there is a discharge of frothy blood from the nostrils. If at liberty, he will stand if possible with his nose extended and facing the open air.

Treatment.—In the first place it is necessary to have the patient so placed that he can obtain as much pure air as possible. He must be placed where his head comes in contact with pure air. By reason of the congestion of the functional vessels, the general circulation is largely checked; hence to stimulate the circulation of the skin and external muscles, it is good practice to rub the body smartly with cloth or wisps of hay or straw, and then clothe warmly. It is also good practice to place the feet in tubs of hot water and bathe the legs well for half an hour or longer with the same, then rub them well with a stimulant liniment, as one made of two ounces of oil of turpentine, four ounces tincture of camphor, one ounce tincture of iodine, four ounces alcohol and water to make a pint. After rubbing well with the liniment the legs should be well wrapped with woollen bandages as high as possible. If proper bandages cannot be obtained, they may be substituted with ropes made of hay or straw. In an hour or two the bandages may be removed, one at a time, the leg well rubbed as above, and then the bandage replaced.

The medicinal treatment must be directed towards equalizing and balancing the circulation. This is a case in which a sedative and stimulants may be used at the same time. In order to directly relieve the congestion of the vessels, it is good practice to draw from the jugular vein four to six quarts of blood. The administration of medicinal sedatives, as aconite, is contra-indicated as such decrease the action of the already feeble heart, but have no action in relieving the congestion, but blood-letting by decreasing the quantity of blood tends to relieve the congestion and of course also weakens the heart's action. In order to counter-balance the weakening action on the heart, it is necessary to give stimulants, both before and after the blood letting. For this purpose any diffusible stimulants, as spirits of nitrous ether (sweet spirits of niter in two to three-ounce doses, in a little cold water, given as a drench, or spirits as whisky, brandy, gin, or rum in four to six-ounce doses in a little cold water. The stimulants may be repeated about every two hours as long as necessary, but it is seldom wise to repeat the blood-letting. If the weather be cold it is necessary that all parts of the animal be well clothed to maintain heat, but in no case may the patient be moved to a warmer stable, where the ventilation is not good. Heat may be sacrificed for pure air; it can be substituted by clothing and bandages, but nothing can be substituted for fresh air. The patient should be allowed all the cold water he will drink and so long as appetite remains given a reasonable supply of soft, easily digested and laxative food. If the appetite fails and he will drink milk, it should be given instead of water, and in order to keep up his strength if necessary he should be drenched with new milk with raw eggs beaten up in it, or with gruel or boiled flaxseed. After the symptoms of congestion have passed, the patient must be very carefully treated, else there is great danger of inflammation of the lungs succeeding. Bearing in mind the probability of the sequel, the patient must be carefully attended to for a few days. His food should be somewhat limited in quantity and of a laxative, easily digested quality and water supplied as freely as he will take it. It is good practice to dissolve in the drinking water twice daily three to four drams of nitrate of potassium for two or three days. He should be kept in well ventilated quarters, excluded from drafts, and he should be kept well clothed until convalescence is complete.

WHIP.

LIVE STOCK.

Our Scottish Letter.

EDITOR "THE FARMER'S ADVOCATE":

War conditions dominate everything, and we are writing at the close of a week in which the results on the great platform have not been exhilarating for the Allies. The Prime Minister delivered one of his heartening speeches at Birkenhead on Friday, and it may frankly be admitted that it was all needed. A man of such inspiring optimism as Mr. Lloyd-George is an immense national asset in such days as these. We are in the midst of a tantalizing harvest; after about a week of fairly good weather culminating in one of the most beautiful of autumn days, there was last night and this morning a rapid fall of the barometer with high winds and heavy rains. Happily the indications are that this has only been a temporary break and an improvement may be looked for. This month of September may be the most fateful in our history. Given good weather right through with an ingathering of one of the most abundant harvests Scotland has ever known, and many things may happen. August was an extremely unfavorable harvest month. The crops were ripening fast as July went out, and then came a succession of weeks of broken weather with heavy thunder storms and floods. In many places the crops have been flattened and twisted so that it is impossible for the fields to be reaped by ordinary means. Added to that is the great scarcity of labor, and the break down of the National Service Organization. Whatever may have been the case in connection with other things the Na-

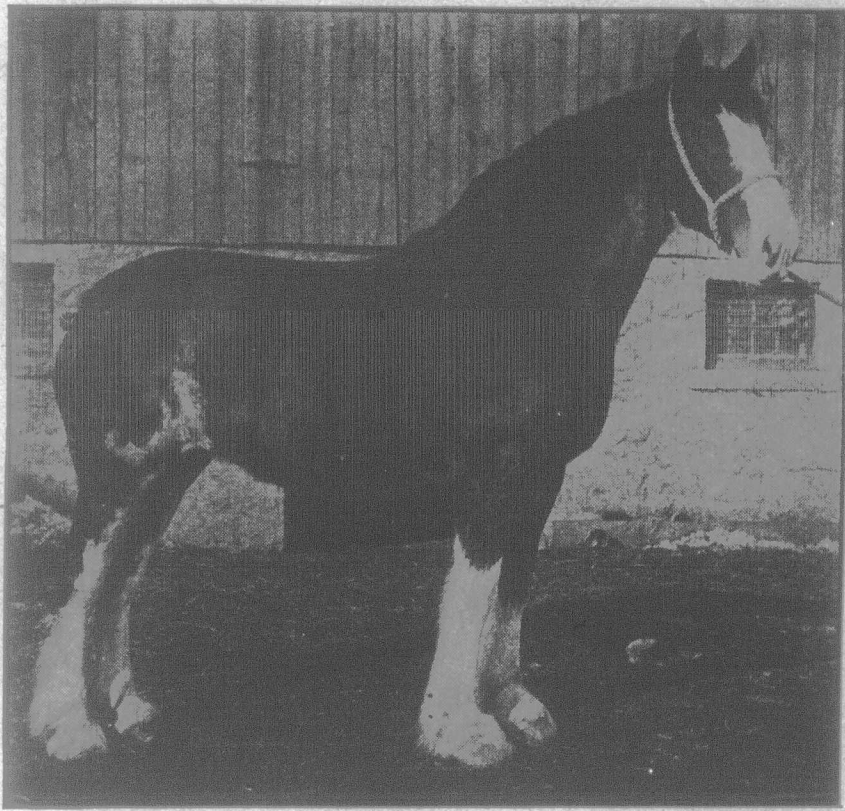
tional Service Department did splendid work for agriculture. It organized soldier labor for spring work in a satisfactory way, and no doubt would have yielded equally good results in harvest. The men who did the work so well all resigned in the wake of Mr. Neville Chamberlain, and no explanation has been given to the country. At the moment there is a breakdown in this Department of National Service. Men cannot be found to reap the over-ripe crops, and there may be heavy loss of grain. Let us hope the silver lining may appear in the clouds, meantime it must be owned that the outlook is not over bright.

Agitation in agricultural circles moves around the work of the Food Controller in dealing with meat and milk. Meat was allowed to rise to unheard-of prices, and of necessity somebody suffers when control is imposed and the interests of the consumer are made paramount. The aim in food control is to secure equitable distribution of the commodity of which there is a shortage. That condition applies to almost all the normal necessities of life to-day, but articles such as meat and milk are so vital to human existence that the State must do something drastic in connection with them. Beef ought never to have been allowed to rise to the price reached during the first half of this year. The middleman was having the time of his life, but unfortunately when the State did intervene it ruthlessly reduced the producer's price and restricted the margin of profit between the producer and the consumer. The producer was not complained against so very much, but he has been badly hit by the new Order and is making a good deal of noise. The Food Controller has patiently listened to all arguments but has at last spoken, declaring that he cannot modify the figures which have been fixed. The scarcity of meat has been caused by the fact that it is now necessary to feed the armies on home beef. The prices to be paid for cattle for this purpose have been fixed at 74s. per live cwt. of 112 lbs. during

impossible to allow markets to be ruled by the ordinary operations of supply and demand. The prevailing scarcity would have afforded too convenient a sphere for the operations of the man who was determined to make money out of the national extremity.

The position regarding milk is critical. Here the Food Controller has to deal with a situation in which so far as the production is concerned, there has been very little opportunity for anything in the nature of profiteering. The milk producer has had to face a cruel situation almost from the outbreak of the war. He then had his contracts fixed for 1914-15, and nothing was done by Government to prevent advance in the price of feeding stuffs. He had, therefore, to fulfil his contracts in many cases at a loss. He, no doubt, safeguarded himself when making his contracts for 1915-16 and in like manner for 1916-17, but before the opening of the former period the Controller had fixed a maximum price relative to the price which was ruling in pre-war days, but he did not fix a maximum price for feeding stuffs. Now he has fixed maximum prices for 1917-18, and those are far from being three times in excess of the pre-war prices, while the cost of staple feeding stuffs for winter use is three times what it was in 1914. The dairy farmer cannot produce milk at 1s. 5d., 1s. 7½d. and 1s. 9d. per gallon during the ensuing winter, when he was only making a fair profit in 1913-14 at 1s. 1d. 1s. 2d. He is paying three times the price he then paid for winter feeding. He has the remedy in his own hands, but it is a bad remedy for the commonwealth. He can sell off his cows, as some are doing, or he can allow them to go dry and then fatten them off and go in for corn or grain growing upon the production of which the Government has put a premium. The growing of grain is a much easier mode of earning a living than the production of milk. The outlook in this department is rather depressing.

In this same connection of food control an order has been issued to masters of fox hounds regarding the rationing of hunting horses. Oats are not being provided for this purpose in order to maintain sport. They are being provided in order that by maintaining the hunts a reserve may be provided out of which army remounts can be drawn. The ration allowed is 6 lbs. of oats per day until first November and 10 lbs. of oats per day from that date when hunting is supposed to begin. Hunting is only indulged in to keep horses fit and to kill down foxes. Masters of Foxhounds have to keep a register of the fit horses belonging to members of their hunts, and each is held responsible for the character of the horses in their respective hunts. If horses are being rationed which are not qualified to be drafted as army remounts the allowances to the offending hunt will be withdrawn. This is as it should be, but it is pitiable to think that horse racing should be allowed in such times as these. Racing horses are allowed, we believe, 12 lbs. oats per day. It seems a gross waste of children's food to give it to horses employed simply for sport.



Manilla.

First-prize Clydesdale brood mare and grand champion at Ottawa, 1917. Exhibited by B. Rothwell, Ottawa.

September, 72s. during October, 67s. during November and 67s. during December. On and after 1st January the figure is 60s. The scheme for purchasing for the army has now had one week's trial, and so far as Scotland is concerned it is publicly announced that the average price paid has been 65s. This would seem to show that farmers are willing to sell the kind of cattle wanted at figures below the maximum. But while these prices have been fixed for cattle bought for the army, no maximum has been put upon the price of cattle bought for civilian consumption. Consequently in the open market butchers have this week been paying from 76s. up to 92s. per live cwt., although prices have been fixed at which they must sell to the consumer, based on a 74s. maximum standard. This situation is rather puzzling to one not acquainted with the livestock trade on its distribution side as dead meat. The cattle for which 92s. have been paid are prime fat and must be estimated by the butchers to yield a high percentage of dead meat. Further it is not easy to rid oneself of the feeling that the complaint of the working classes that there has been profiteering in the dead meat trade is well founded. Lord Rhondda has fixed the prices to the consumer on the basis of the butcher paying not more than 74s. per live cwt., yet the butcher knowing that this is all the price he can get for the beef, pays not 72s. but 92s. for fat cattle. Surely he sees his way out, and if he does he must have been making money when he was charging from one penny to threepence per lb. more for beef than he is allowed to charge now. We leave it at that. Before another month there will be developments and it may then be possible to form a better judgment than now. One thing seems clear. Under existing conditions it is

taken this year in the employment of mechanical tractors in ploughing. Several demonstrations of a private or semi-public nature have already taken place. One of the most successful tractors is the Moline Universal Tractor. It has been seen at work both in hay mowing and in ploughing and the work done has generally been greatly applauded. The Highland and Agricultural Society are organizing three demonstrations, each to extend over two days, in the Edinburgh, Perth and Glasgow areas. These demonstrations will afford ample opportunity for farmers forming their own opinions regarding motor traction in certain agricultural operations. So far the tractors in use have been advantageous under conditions which do not widely prevail in Scotland. It yet remains to be seen whether they can face the steep braes and take the side ploughing which is often required in Scotland.

Whatever the ultimate issue, it is obvious that horse breeders have no anticipation that the day of the horse is over. Horse hiring has rarely been more brisk than during the past few years, and indeed we do not suppose there have ever been as many horses hired for years ahead as there are at the present time. The Clydesdale ranks have been thinned by the death of Messrs. A. & W. Montgomery's famous champion horse "Everlasting" 11331. He was the weightiest and most powerful of all the sons of Baron's Pride, and left great crops of foals in every district in which he travelled. He was kicked by a mare and had his leg broken so that he had to be destroyed. Curiously enough his famous half-brother Baron of Buchlyvie met his death in the same way.

Changing the subject, a great blank has been made in the ranks of Shorthorn men through the death of

The Background of Shorthorn Pedigrees.

People usually buy cattle, but sometimes they buy pedigrees. In exciting times when a breed is "suffering" from a boom a pedigree is frequently worth more than the animal whose breeding it describes. When such condition does arise the breeders are too often "riding for a fall". When the fever subsides the trade is weak, languid or even prostrate, and the buyer has some very fashionable pedigrees locked in his safe but the cattle in the stable do not have the proper individuality to match them. Perhaps the most memorable event and greatest folly in history arising out of this "traffic in pedigrees" was the New York Mills dispersion sale, on September 10, 1873. In the heat and excitement of the bidding for Bates-bred cattle, \$40,000 was placed on the 8th. Duchess of Geneva, while twelve females and three bulls of the Thorndale, Geneva and Oneida tribes of the Duchess family averaged \$17,523. Bates cattle were then in demand and good as they were no one can gainsay the statement that pedigrees, not cows, were the real prizes of that eventful day. On the other hand, breeds and live stock improvement are just as impossible without pedigrees as a high standard of social life and the legal distribution of property would be in the human race without marriage licenses, birth registrations, etc. The whole pure-bred live stock industry is built on the records but before one can interpret a pedigree satisfactorily it is necessary to be able to associate the names of the animals with the different herds from which they sprang and to discount a certain family name according to infusions of common or unfashionable blood in the lineage of the animal in question.

The origin of some families is remote indeed, and while many of them were promising in the start outstanding qualifications have been lost in the generations lying between the present and the past, until some of the tribal names are little more than common. Considerable significance is attached to the names of the estates whereon Shorthorns were bred for they have clung in many cases to the descendants of the original stock. Barmpton, Warlaby, Kirklevington, Uppermill, Sittyton, etc., are only a few of such which one meets with every day in Shorthorn pedigrees. An understanding of these is a valuable asset.

The First Family Founders.

Charles Colling of Ketton, and Robert Colling of Barmpton, in the County of Durham, England, were really the first to establish distinct families through consistent breeding along particular lines. In some instances their cows proved to be only the foundations for famous families in later days the progeny not being numerous enough in the Colling herds to constitute a tribe. Ketton was the birthplace of the Duchesses, later so famous at Kirklevington. In the dispersion sale at Ketton, too, were the Cherry foundation, which was a contributing factor to the Brawith tribe. Others were the Daisy, Red Rose and Phoenix. Barmpton was the home of the Princess tribe, the oldest on record and one of the most important in the early improvement of the breed. In addition to these were the Wildairs, Gwynnes and Venuses.

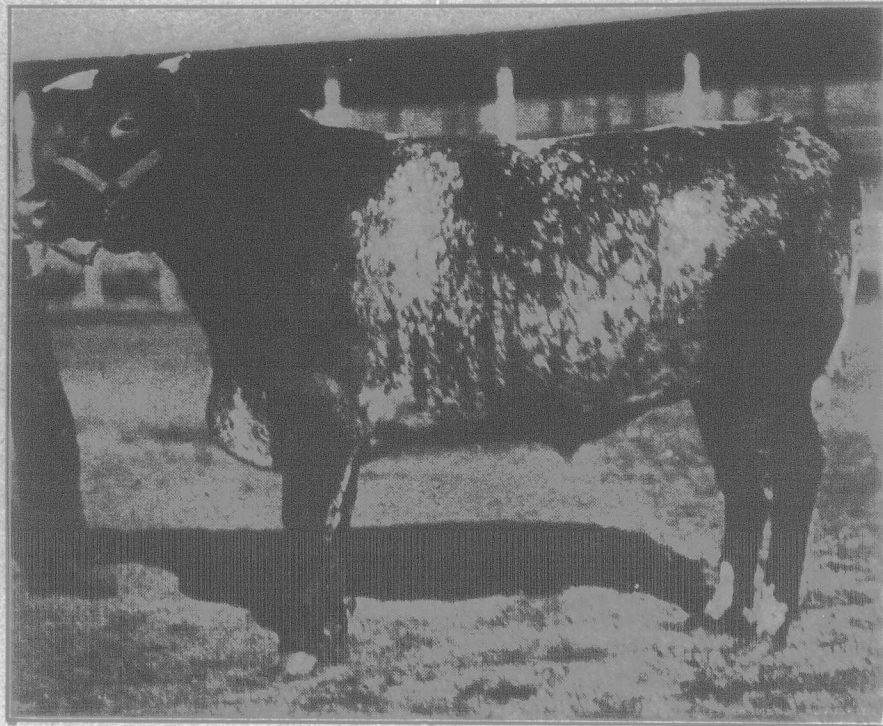
Warlaby, Killerby and Studley were the scenes of the many activities of the Booths, who achieved great fame in the show-ring and who live in history as one of the greatest groups of Shorthorn improvers of early days. They strove for quick maturity and easy-fleshing qualities, whereas Thomas Bates, of Kirklevington, a contemporary, sought all these but insisted on his cows being good milkers. This led to a division in the camp and for a period of thirty-five years the breeders who championed the Booth and the Bates types of cattle separated under the different banners. An erroneous impression, somewhat common, regarding Bates-bred cattle should be referred to here. Bates and the Booths were, as already stated, contemporaries; the latter bred for beef qualities only while Thomas Bates looked for good conformation and fleshing qualities just as much, but along with them he sought milking proclivities in order to establish a more serviceable kind of cattle. Bates Shorthorns were not of dairy type as some believe; they were Shorthorns first with some ability to give milk as well as lay on flesh. To Thomas Bates is due considerable credit

for the popularity of the present-day Shorthorn, which, in turn, is based on the general dual-purpose character of the breed given it by the absorption of Bates blood.

Thomas Booth began operations at the beautiful Yorkshire estate, Killerby, some time prior to 1790. He made liberal use of bulls from Ketton and Barmpton. Noteworthy among his earliest activities was the Fairholme experiment. Five heifers were secured from a Mr. Broader, at Fairholme, and mated with Colling bulls. These crosses gave rise to the Fairholme or Blossom tribe, the old Booth Red Rose, and the Ariadne or Bright Eyes tribes. The Hainaby, or Strawberry family was the pet tribe of the elder Booth. From this blood came the noted bulls, Rockingham and Priam and the Bride Elect sort. The Bracelets are another of the fashionable kind originated in Killerby.

In 1814 Richard Booth, a son of Thomas, began breeding Shorthorns at Studley, where he carried the Booth cattle to even greater perfection. The Isabellas and Annas were the most important tribes developed there. In 1819 Thomas Booth moved to Warlaby, leaving Killerby in possession of a son, John. Warlaby is still in the Booth family and maintains a Shorthorn herd. Other families of Booth origin are the Mantalinis, Moss Roses, and Cherry Blossoms.

Mention has already been made of Thomas Bates, of Kirklevington. With him were originated the Oxforths, Waterloos, Wild Eyes, Cambridge Roses, Fogathorpes and Secrets. The Roan Duchess sort traces



Clear the Way.

Champion fat steer at Toronto and London, for T. A. Russell, Downsview.

back to Bates breeding, while the Duchess family was his pride throughout the period of his activities and in the hands of other breeders was the object about which centred so much controversy and frenzied bidding. Bates considered his Duchesses too good to mate with bulls of other strains. This led to close breeding which in time absolutely necessitated the infusion of new blood. "The hope of the Shorthorns," as Bates termed it, was found in Belvedere, a sprig of the old Princess family of Robert Colling foundation, which was the only outside strain to command any respect at Kirklevington at that time. Through the union of Duchess and Princess blood Bates promised to produce "Shorthorns such as the world has never seen," and annals of the breed acknowledge that he came very near to making good his boast. Belvedere sired the famous Duchess 34th, which bred back to her sire produced the great Duke of Northumberland, the best bull Bates ever bred and the undisputed champion of England in 1842. The Duke came from a line of Duchess cows but the ancestry mentioned here would show him to have only twenty-five per cent. of Duchess blood, the remainder being Princess blood transmitted through the bull Belvedere. According to Shorthorn nomenclature and a system of setting down pedigrees, he would be declared at once a Duchess bull. This reveals the folly of placing too much stress on the maternal ancestry of an individual as set forth in abbreviated pedigrees, such as are printed in sale catalogues and elsewhere.

Messrs. Bell, tenants of Thomas Bates, secured females at Kirklevington and developed some distinct strains which enjoyed the wave of popularity in which Bates Shorthorns were engulfed. Among these families were the Acomb, Barrington, Craggs, Fletcher, Northallerton, and Place strains. There was still another,

time were produced the Rosys, Rubys, and Quickleys, through a combination of existing strains. William Torr, of Aylesby, a contemporary of the Booth Brothers and Thomas Bates, was one of the leading breeders of the time and founded the Aylesby Brights, Sylphs and Aylesby Flowers.

Shorthorn Breeding in Scotland.

In the turn of events during the last half century the pendulum has swung over to the Scotch Shorthorn and now what are known as fashionable pedigrees savor strongly of Scotch breeding. Captain Barclay of Ury, was really the father of Shorthorn breeding in Scotland, and while no great families bear the Ury name, the bulls he turned out created such an impression as to induce other notable men to the banner. Among these may be mentioned Grant Duff of Eden; The Cruickshanks of Sittyton; Douglas of Athelstaneford; Campbell of Kinellar; Marr of Uppermill, and Duthie of Collynie.

Noteworthy among the cattle at Eden was the cow Brawith Bud, which contributed to the family made by Amos Cruickshank.

Little need be said regarding the quality or character of the Shorthorn cattle bred by Amos Cruickshank of Sittyton. Breeders gladly acknowledge Cruickshank breeding if they have it in their cattle and it is to be found in the families mentioned below: Violet, Venus, Mimulus, Picotee, Matchless, Broadhooks, Lady, Nonpareil, Sittyton Butterfly, Orange Blossoms, Clipper, Lancaster, Brawith Bud, Duchess of Gloster, Secret, Cicely, Avalanche, Violette, Lovely, Barmpton Rose, Spicy, Lavender and Crocus. These families were all produced or carried to greater perfection at Sittyton and in connection with these it might also be valuable to mention the herd bulls used. Some of the more important ones were: Fairfax Royal (6987), Matadore (11800), Plantaganet (11906), Doctor Buckingham (14405), The Baron (13833), Lord Bathurst (15173), Master Butterfly 2nd (14918), John Bull (11618), Lord Raglan (13244), The Czar (20947), Lancaster Comet (11663), Champion of England (17526), Windsor Augustus (19157), Forth (17866), Lord Privy Seal (16444), Prince Alfred (27107), Scotland's Pride, Caesar Augustus, Royal Duke of Gloster, Roan Gauntlet, Barmpton and Cumberland.

In the herd of Sylvester Campbell of Kinellar, in Aberdeenshire, the Nonpareils, Miss Ramsdens, and Golden Drops were developed.

The name "Uppermill" is frequently met with in connection with Scotch Shorthorns this being the holding of William S. Marr who operated in the same district as Sittyton. A splendid herd was assembled including such well-known tribes as the Maudes, The Missies, Princess Royals, the Alexandrinas, Roan or Red Lady's Bessies, Claras, Emmas and Goldies. Some of the herd sires in use were: Heir of Englishman (24122), Cherub 4th (83359), Athabasca (47359), and William of Orange (50694).

In 1889 the entire Sittyton herd of 154 head was sold for export to the Argentine. Through the failure of a banking firm the deal was canceled and the world-famous Shorthorns were distributed in Great Britain. Wm. Duthie of Collynie, a neighbor of the Cruickshanks, took the majority of the aged females, while all the yearling heifers with the exception of the Violet tribe went into the hands of J. Deane Willis of Bapton Manor, Codford, England. Duthie had long been using Cruickshank bulls and his herd was already steeped in Sittyton blood. By securing the breeding females of the neighbor herd he established himself firmly in the Shorthorn breeding fraternity, a position he occupies until this day. With his purchase in 1890, J. Deane Willis secured, in addition to the heifers, the two bulls Scottish Archer and Captain of the Guard. Thus it was that the south of England became a source of Scotch-bred Shorthorns to which breeders on this side of the Atlantic frequently resort for selections.

It would not be out of place here to mention some of the impressive sires used in Britain during the latter part of the 19th century. Amongst the names of such are found Beau Benedict, Captain of the Guard, Clear the Way, Count Lavender, Count Victor, Cumberland, Duke of Aosta, Duke of Connaught, Earl of March, Field Marshal Grovesend, Heir of Englishman, Knickerbocker, Pride of Morning, Prince Victor, Rising Star, Roan Gauntlet, Royal Duke, Royal Errant, Royal Windsor, Scotland's Pride, Scottish Archer, Sign of Riches, Sir Arthur Ingram, Telemachus, Wanderer, Windsor Fitz-Windsor, William of Orange. All these sires left an impression on the breed which entitles them to an eminent place in Shorthorn annals.

It is always safe practice to maintain the live stock in fair flesh at this season. Stock which goes into winter quarters in good condition are more easily wintered than are animals which have been allowed to go down in the fall. Pastures have been unusually luxuriant this year and feed has generally been plentiful in the fields, but dry weather throughout September has made a difference, and with the cooler weather coming on some extra feeding may be found necessary. It would be better business to use a little winter feed early and keep up good condition than to allow the stock to get thin before final stabling for winter is necessary.

I have just been reading a letter entitled "Art in Public Schools" by "One Farmer's Wife," in Sept. 13th issue of "The Farmer's Advocate." I agree with her that perhaps a little too much stress is laid on art in school work, and I think it should be a bonus subject.

So far so good, but when I read the last paragraph censuring the study of the things around us, nature study, in schools I immediately took up my pen to reply. "Such a waste of time," says the Farmer's Wife. I wonder how many of the common plants she knows by name. When she sees a bad weed does she know how to eradicate it? No, she does not, nor does she want her sons and daughters to know. She does not see any need of knowing the insects by name, whether they do good by destroying other insects or whether they are harmful to farm crops, and how to destroy them.

"They are expected to go to the bush and hunt for some simple flower," she says. It is easily seen

goes back through the lane to the woods on a quiet Sunday morning she does not see the sermon that is written in every blade of grass under her feet, she does not recognize the beautiful wild flowers of woodland and meadow which should add such a charm to farm life. She does not hear the sweet singing of the birds; there is no music for her in the gurgling and liquid notes of the Bobolink or in the mimicking carols of the Brown Thrasher.

I could go on, but this, I think, is enough. Yes, let us continue to have nature study in our public schools. It appeals only to a few back numbers as a "waste of time," but it is to be hoped that all will soon come to see the great pleasure it adds to farm life especially, and the great advantage of knowing the weeds, whether bad or not, and how to keep them in check or eradicate them.

Elgin Co., Ont.

SUBSCRIBER'S SON.

What Did That Crop Cost You?

A commercial business that has a poor system of keeping books, or that has careless accountants, sooner or later finds its business or credit waning, but, with little pretence at bookkeeping or cost accounting farmers have kept their heads above water for centuries. Occasionally one goes bankrupt, many find difficulty in reducing the mortgage, while a few are fortunate enough to make a financial success of agriculture. It is generally admitted that while a living can be extracted from most farms, there is no big money in the business. In fact, it is not a difficult task to figure that the average farmer and his family are working for a mere pittance if interest on investment, depreciation, etc., are allowed on the same basis as in a commercial enterprise. Certain crops are grown and harvested year after year and fed to certain classes of live stock, but little attempt is made to ascertain if it pays to grow a particular crop on a certain field, or whether or not every member of the herd and flock is paying for its keep. The status of the bank account at the end of the year is the gauge which measures the success or failure of the business and a fairly accurate gauge it is. However, it does not show all. The farm, stock, implements, etc., may have a higher or a lower value at the end of this year than they had last year, owing to various circumstances; the bank book doesn't show this increase or decrease in actual wealth. Some years the real balance would be satisfactory, while other years it would create a disturbing sensation in the minds of most financiers. Undoubtedly, farming is the most difficult business to keep books on as so many features over which the manager has little control influence the returns. Again, the farmer is not entrusted with setting his own price. It is set for him with every product he has to sell, irrespective of what it costs to produce, and yet he is compelled to purchase his supplies on a controlled market. Manufacturers, using the same class of machinery and raw material, have approximately the same cost for putting a finished article on the market, therefore, can readily set a price which returns a profit. Not so with a number of farmers growing or manufacturing a certain crop or animal. One farm produces a better crop of wheat, oats, corn, etc., than the adjoining farm, and by reason of this at a smaller expense per bushel. If the selling price were set to give a reasonable profit over what it cost the farmer on the low-yielding farm to grow the crop, it would give a big advantage to those located on

as compared with his commercial brother when it comes to regulating yearly profits. Legislation discriminates in favor of the manufacturer. It always has. The tiller of the soil, representing the most essential class of people to the country, is made the goat. He receives promises, advice, etc., but little financial or legislative assistance from the powers that be. He must work out his own destiny as best he can, oftentimes under adverse conditions.

While cost accounting on the farm may not influence or regulate the price of farm products, it will indicate the crop, class of stock or branch of farming which pays best. True, some crops which entail a lot of work and do not always prove remunerative in themselves must be grown to aid in making a balanced ration when feeding the more profitable crops. There is too much custom and not enough initiative or studying of the business. Why grow a certain acreage of oats year after year if the soil is unsuited and it costs as much to grow a bushel as it can be bought for, when that same soil might grow a paying crop of wheat, corn, hay or pasture, or vice versa? In this age of keen competition it is essential to success that a close study be made of the business so that the least profitable phases may be eliminated, leaving more time to be devoted to the other branches. To do this it is necessary to have some idea of what it costs to grow the various crops, or feed the various individuals in the herd or flock. In regard to crops—rent of land, seed, man and horse labor, machinery, time, etc., must be considered; with stock—cost of feed, labor, interest on investment, use of buildings, etc., are items to be taken into account. To secure authentic figures necessitates keeping records of work done with each crop and of feeding operations. Few bother with figures and judge the profitability of a crop by the appearance, regardless of the amount of labor entailed in securing it. However, we believe that there would be a marked change in the operations on many farms if the owners followed a system of cost accounting.

The actual cost of producing ordinary farm crops is figured out on very few farms, but to give an idea of the expenses under certain conditions we publish herewith a table showing the cost of producing several crops at the Ontario Agricultural College, in 1915, and an additional column of figures gives an estimate of the cost per bushel or ton in 1917.

for 1917 we left the rent of land and use of buildings the same as in 1915. The cost of seed and twine was placed fifty per cent. higher, and labor was estimated to be a third higher this year than it was two years ago. Interest and use of machinery were left the same. Thus we found that figuring on the same yield for the two years a bushel of barley would cost 48½ cents this year as compared with 36½ cents in 1915. Oats figured out at 6½ cents more per bushel. The market price of these grains is considerably higher than it was two years ago and more than offsets the increased cost of production. No one can afford to sell hay at eight or nine dollars per ton and secure rent, wages, interest, etc., if it costs that much to produce it. Ten dollars a ton may look like a fair price to those who never stopped to figure up the cost of a ton when placed in the barn.

The cost of horse labor was arrived at by keeping an account of feed, bedding, drugs, time, use of buildings, interest on money invested and blacksmith bills of all horses used for the entire year, and dividing it by the number of hours worked. On this basis horse labor cost 10½ cents per hour. It will cost around that figure on the average farm if every item of expense is counted. It will be higher if there are many idle days.

It is nothing more than good business to know the cost price of every article produced on the farm. It is one way of making the farm an efficient factory. It can be done by keeping track of the hours spent plowing, cultivating, seeding, harvesting and threshing each field, and charging the time at so much an hour. Rent of land, seed, twine and use of machinery would have to be added in order to arrive at the total cost of the crop on a certain field. If the grain is not measured as it comes from the machine, the number of bushels can be estimated in the bin. The bushels of roots in a cellar or tons of corn in a silo can also be estimated. There is nothing very complicated about cost accounting, and it certainly shows the profit or loss in each department of the farm. The weak points can be strengthened or eliminated from the operations, and something of more value substituted. Make note of the time spent this fall in plowing a field for grain or hoed crop next year, and follow it up next spring by marking down time spent at seeding operations. Consider the various items of expense as given in the preceding table. It should be at least interesting to know what it actually costs to grow a bushel of grain, or a ton of corn or hay on the home farm. It may lead to more careful planning of the rotation and of work in general.

Cure Some Corn.

EDITOR "THE FARMER'S ADVOCATE":

I will outline conditions as I see them at present, and also some things emphasized by this year's corn crop.

The weather conditions of last spring and early summer were none too favorable for corn. This summer has not only been cool but according to temperatures recorded, below the average in coolness—in fact, the coolest in 18 years. Hence Ontario, being almost on the northern limit of the corn maturing zone of America has not a crop of corn that will mature well this fall. There will be comparatively little mature corn of high feeding value, in Ontario, apart from that saved as seed, which will reach the market, and far below the ordinary amount in general. Many farmers will only have a small per cent mature, and many will not have any mature corn.

Crop	Acres	Rent of Land		Use of Bldgs.		Seed	Man labor	Horse labor	Use of machinery	Twine	Extra labor, threshing	Manure applied	Interest	Total cost	Value unexhausted manure and labor and seed	Value straw	Net cost	Total yield	Yield per acre	Cost per bushel or ton 1915	Estimated cost per bushel or ton in 1917
		\$	c.	\$	c.																
Barley.....	36	180.00	60.00	44.80	182.40	170.60	67.45	8.25	7.00	20.00	740.50	72.00	668.50	2,040	56.6	36½	48½				
Oats, all fields.....	106	530.00	147.00	171.60	516.88	502.67	198.68	26.57	50.28	30.75	56.57	2,240.90	13.87	2,570.03	6,108	57.6	32½	38½			
Wheat.....	11	55.00	22.00	25.20	135.17	141.36	55.89	5.10	16.07	455.79	32.00	423.79	550	50	77	92½					
Mangels.....	10	50.00	48.00	4.40	189.35	124.66	49.43	82.50	14.67	563.01	68.31	494.70	10,540	1,054	4.75	5.1					
Turnips.....	6	30.00	24.00	1.80	97.00	71.16	28.14	52.50	8.72	313.42	26.25	287.17	2,860	476	10	12					
Alfalfa.....	20	100.00	32.00	133.34	72.78	44.72	17.68	13.42	413.94	66.67	347.27	44½	2¾	7.76	8.31						
Clover.....	34	170.00	65.00	68.88	57.38	46.33	18.31	6.36	432.26	3.92	260.44	32½	1¾	6.53	7.83						
Clover.....	22	110.00	30.00	46.20	40.17	21.61	8.54	2.86	343.81	343.81	52	1	6.61	7.92							
Timothy.....	40	200.00	55.00	45.45	29.03	11.47	36.20	1,744.94	175.57	1,569.37	402	8	3.90	4.68							
Corn Silage, all fields..	50	250.00	80.00	24.68	410.42	487.83	194.87	37.44	210.50	36.20	1,744.94	175.57	1,569.37	402	8	3.90	4.68				

the best farms. On the other hand, if prices were set on the basis of cost of production on the best farms, where would the other farmers not so favorably situated get off? Again, moisture is often the deciding factor in crop production, but showers may be local. One locality may be favored with showers once a week during the growing period, while a mile distant not a drop of rain falls for weeks at a stretch. One or two farms may be singled out for the path of a cyclone or hail storm, which leaves a devastated trail, which would materially increase the cost of production on the farm. There is no question but that the farmer is at a disadvantage

The yield greatly influences the cost per bushel or ton so that while the figures give the actual cost on the College farm, they are but approximate for the average farm, depending on the yield, rent charged, work performed, etc. It is rather significant that the hay crops were grown at from thirty to fifty per cent. cheaper than they could be purchased at that time, and oats cost from seventy-five to eighty-five per cent. of what they could be bought for. This relationship shows that all roughages needed should be grown on the farm. They can be grown cheaper than the grains. There may be districts, however, where grains do better than the hay

From this it is plain that Ontario should put forth an extra effort to save as much seed as possible. Next year's crop depends upon it, or else a large amount of American corn will be sown for husking purposes. This is not advisable.

Ontario strains that mature well here are the only ones to select. Maturity and adaptability are two big words in selecting corn for seed. The season is late. Corn will not have the usual weather conditions to dry it. By all means seed corn should be picked in the field from healthy stalks bearing ears of medium height from the ground. The higher the ear is on the

stalk the later it matures. Corn selected this way should be dried at once. The object in doing this is to reduce the moisture content in the cob and grain to 15 per cent. or less. If there is much moisture when heavy frosts come, the germ power or vitality of the seed is injured.

Braid up a few ears with their husks, or rack up in strings of twine, and dry in a summer kitchen where there is a stove, if no other method is at hand. Well dried seed insures over 90 per cent growth next spring.

All farmers who can, should obtain their seed this fall and keep it in the ear in a dry place. Obtain at least 20 ears this fall for every acre of corn to be planted next spring.

Chatham. P. T. FANCHER, Corn Specialist.

"Time Killing Trash" in the Public Schools.

EDITOR "THE FARMER'S ADVOCATE":

The letter of a Bruce Farmer's Wife, on page 1437, adversely criticizing art and nature study in the public schools is written in a spirit that seems to challenge controversy. Now, although I have been a teacher of nature study for many years, I am not writing this note to refute her charges; on the contrary if they were more moderately expressed and more definite I might be willing to endorse them. Many intelligent and discerning people hold a high opinion of both art and nature study as subjects of instruction in public schools, therefore, it is worth inquiring why she and others can speak of them as "time-killing trash."

In the first place, I think that she has an entire misconception of the nature of nature study. Ravishing the wild flora of our woodlands and pressing the last vestige of life out of the broken plants until a stated number of such victims is reached is not nature study. Neither is catching and killing insects and counting their lifeless organs. These activities have not a single quality of real nature study. The teacher who understands the subject and practices what he knows will impress his pupils that no living plant or insect or reptile or any other living organism should be destroyed in the name of nature study without an intelligent and sufficient reason for such destruction. A girl who had captured and pinned a beautiful and useful insect, on being asked what harm it had done and why she had destroyed it answered that she was making a collection of twenty-five insects. Now, chasing an active insect in the open air may be good physical exercise and pinning it in a row in a pretty box may be a bit of manual training, but by no stretch of reasoning can it be shown to be nature study. Had she observed the living insect, enjoyed its beauty, investigated and appreciated its useful service and left it to pursue its way she could properly call this experience nature study. Is it educational "trash" to train children to observe the activities of plants and animals and particularly of people, and to study the order and reason for these activities—in short to make them intelligent investigators of their environment? This is nature study, and such training cannot possibly fail to be a most useful kind of education, no matter what the future vocation of its recipient may be. Further by multiplying and deepening interests it adds not only to the usefulness but to the pleasures of life. A man whose business took him amongst farmers of the "Middle West" found that on the average the people who had nothing but hogs and corn around their doors were on a different plane from the average of those who had flowers as well as hogs and corn. The mere making of collections of plants and insects may easily degenerate to "trash," but against nature study defined as giving children a sympathetic and intelligent attitude towards what is good and useful and beautiful in their surroundings I have never heard or read a single valid objection.

Bruce Farmer's Wife also states that she studied art at school and has never found any use for it since. The term "art," like the other one, may be variously understood. Clearly, the training to use a pencil-point to express one's concepts in line-drawing—it may be directions to the carpenter or dress-maker—or to understand line-drawings when made by others—it may be a house plan or a dress pattern—is next in usefulness to the art of expressing such conceptions in written language. Even picture-making with crayon or brush

when properly taught and kept in proper relation to the other parts of the subject can be justified on very obvious grounds.

JOHN DEARNESS.

Travelling Facilities.

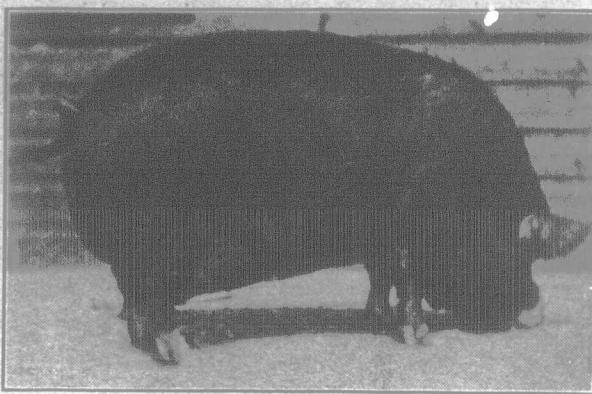
EDITOR "THE FARMER'S ADVOCATE":

With what rapidity we accustom ourselves to any change which adds to our comfort or convenience, soon viewing any such innovation as merely a matter-of-course. Note the vast forward movement regarding transportation alone, since the days of our grandfathers—yes and many of our fathers. Had many of to-day's necessities been then proposed, the idea would have been considered as a hallucination of an imaginative mind or a fairy tale. Floating palaces ply our waters, railway carriages are equipped with wonderful means to alleviate the tedium of travel, and yet we grumble. Did we but consider the inconveniences of a sailing vessel, with weeks and even months spent therein, the springless ox-cart, the only means of transportation to the interior upon landing, I venture to say that we with advantages of modern modes of transit would surely find less fault.

However, steam appliances have long since ceased to be viewed with wonder and we no longer gaze open-mouthed at the automobile chugging noisily by. Indeed, unless to fly to a place of safety we scarcely note its passing. The air-man with his weird craft and bird-like movements now holds the eye of the world, while we speak confidently of the coming time when this too will have become as other inventions once considered impossible. But is there not a danger of such being overdone? Is the speed craze not growing upon us and we becoming insatiable in this respect? Faster trains, faster boats, faster and yet faster motor cars. "No time," is our slogan as we flit from place to place. Although up-to-date and in many respects ahead of our fathers are we a much better people? Let us pause and consider.

Lambton Co., Ont.

E. WILSON.



Champion Berkshire Sow.

A winner at Toronto, 1917; exhibited by Adam Thompson, Stratford, Ontario.

Farming is Different.

EDITOR "THE FARMER'S ADVOCATE":

In your issue of Sept. 13th is a letter from G. T. Marsh, Grey Co., under the heading, "Show the Way to Farm." Here are a few thoughts suggested by it.

There are many factory owners who are not conversant with the details of the production of goods in their factories, but they are good business men, and are not afraid to pay for the services of men who do know, and who can deliver the goods in results. Mr. Marsh speaks of the way in which some factories have been put on a paying basis by productive engineers. This could only have been done in cases where time and power could be saved by alterations in the handling of the work, and possibly through the installation of new machinery and a regrouping of the old. The productive engineer may be able to reconstruct the factory and install time-saving methods for the production of the goods, but the business management must find the capital for making the changes proposed by the pro-

ductive engineer, and must also find a market for the goods and know when and when not to stock up with certain lines. The case with the farmer is entirely different. He not only must be his own business manager but he must be his own productive engineer. I speak of the majority of farmers—not of the few business men who have taken up farming as a side line, and whose farm work is done entirely by hired help. Real sons of the soil, descended from a line of successful farmers, and having themselves a keen interest in farming, with the family business sense well developed, not only find helpful suggestions in the bulletins issued by the Department of Agriculture, but appropriate the research work done at the colleges and experimental farms.

Successful farmers are born—not made, and any man who finds he cannot make a success of his farm should turn his abilities into another channel which will bring him success. If a farmer wants a man to show him how to make his farm pay, such men can be got, but like productive engineers they have to be paid, and money would also have to be found for such changes as they would recommend.

There is no doubt also that many of the men capable of showing the farmer what he wants to know would have received part of their education at an agricultural college, even as productive engineers receive education at colleges where engineering is made a specialty.

Huron Co., Ont.

DERMOT McEVoy.

War-Time Living.

EDITOR "THE FARMER'S ADVOCATE":

Among the mail that came to me to-day was a pamphlet sent by the Government, entitled, "How to live in war time." Doubtless this will be received by every farmer, and to my mind is an insult to the intelligence of every farmer's wife. For instance, they are told "Not to fill the bread box too full," and "not to leave soap in water, but after using put in a dry place." Such trash to waste the people's money on. But I suppose the Government must find some way to spend the money.

We are told to eat whole-wheat bread instead of white, to use fish instead of bacon or beef, or to have meatless days. Will whole-wheat bread be productive of thrift? When we eat white bread are the middlings, shorts and bran wasted? No! The public receives these by-products of white flour back in the form of beef, pork, milk or cheese. Mr. Food Controller show us the waste! If I have any understanding of farm management, there is no waste on the farm, as chickens or pigs get all the left-overs, and eventually our city friends receive their share.

A story is told that in an asylum in the States they test the patient's mental capacity by taking them into a room, with about one foot of water on the floor, and the water tap turned on. The patient is asked to dip out the water. If he turns off the tap before starting to dip out the water he is considered cured. If he starts to dip with the tap turned on he is detained longer. I think by this test our Government is a little wrong in the head. They seek to dip out the waste among the farmers and working classes (where there is little if any) and leave the tap turned on among the higher-ups, government officials and high society fairies.

Any one who reads Toronto papers must be struck by the waste of time and food that is one of the accompaniments of a visit of great personages to the Queen City. They are banqueted each day, or rather three or four times a day. We wonder if these banquets are necessities or luxuries. If they are the latter, where is the Food Controller? Or are the laws of this land to be obeyed only by the poor?

Then what about all these "ladies-in-waiting" and these A. D. C.'s, are these people luxuries or necessities? Now to the point. Our farmers and working people are loyal and willing to do their bit for our "Land of Liberty," but we would like to let our Government know that practice is better than precept, and that we don't mind them "bringing us up in the way we should go" if they will go that way themselves. Till the big tap is shut off the Government or the Food Controller need not look for a hearty response. To be candid, we expect the "makers of laws" to also be "obeyers of laws."

Perth Co., Ont.

SUBURBANITE.

Automobiles, Farm Machinery and Farm Motors.

Double Declutching.

A great majority of the cars on the market at the present time have what is known as a selective sliding type of transmission with three speeds forward, and a single reverse speed. There is a gear shifting lever located in the centre of the front of the car for the purpose of changing the speeds as desired. Now, perhaps you have noticed that some drivers seem to move away from you like thieves in the night. Their departure is almost noiseless. Other owners rattle the gears in a most distressing fashion, in fact, one is often led to believe that an iron foundry has started operation in the immediate vicinity. A book could be written upon the gear changing system and the beauty of its perfection. Many volumes could also be laid down upon the same system and the ugliness of its imperfection. If you have a machine with the selective sliding type of transmission and you find that you are not able to change

gears without making unpleasant sounds, we would ask you to pay strict attention to what follows in this article. Taking up the first or low gear it can be said that usually there is not much difficulty in moving it in quiet fashion, but if you have trouble in doing so, you can always overcome the noise by putting the car into low gear before starting the engine, always remembering that the foot must keep the clutch pedal down until you are prepared to move away. The second or intermediate gear and the third or high gear cannot, of course, be prevented from grinding by any similar system. This, of course, is obvious. The plan followed by the average motorist is to gauge the proper speed at which the gears will mesh noiselessly, moving from first to second speed, and then make use of the gear shift lever. Previously, however, the driver has pressed the clutch down to the desired point. Double declutching is an expression given to a method that with a little practice enables any driver to change gears

from low to intermediate and from intermediate to high without grating sounds. This is the line of operation. Press the clutch pedal down and move the gear shifting lever from the first gear into neutral, then release the clutch lever, wait a second or two, press it down again and move the gear shift lever into intermediate. Follow the same action in going from second into third or high gear and you will find, with a little practice, that the trick can be done with an entire absence of noise. The double declutching method is, in a few words, what its name implies, the system of pressing the clutch twice where previously you only pressed it once. We do not take any credit for originating or giving birth to the idea. We must be frank and say that it was brought to us by a returned soldier, who said that in Europe it was constantly used by drivers in charge of high speed motors. This same veteran brings back the interesting information that many emergency brakes in the Old World press forward instead of pull

back, as they do in this country. Any emergency brake must of necessity be used with the greatest economy of time. You can readily understand that pressing one forward is easier than pulling one back. The former only requires one movement, while the latter needs two. He also says that gear shift levers are much higher, in fact, almost like walking sticks. Perhaps you have noticed that this type is becoming popular here as is evidenced by many of the 1916 models. We have been asked on several occasions regarding the value of the cut-out. Our personal opinion is that the only good purpose served by a cut-out is that it provides a good way to listen to the exhaust of an engine. Of course, through its use some of the foreign matter of combustion is more easily blown out. The trouble with the cut-out is that many motorists abuse it by needless operation during the late hours of the night and those of the early morning, when tired people are more anxious to sleep than to listen to its loud rattle. AUTO.

Cost of Tractor Plowing.

Official Report of Test Made at Iowa Agricultural College.

The agricultural engineering department of the Iowa State College recently made public the report of a tractor plowing test undertaken to demonstrate plowing. The test was made on October 13 and 14, 1916, in a field near the college. The average length of the furrow was 548 feet (33.2 rods). Because of the short field, one-sixth of the time was spent in turning.

The plowing was done with a Case 10-20 tractor pulling three 14-inch Grand Detour plows. The average rate of speed was 2.25 miles per hour. The average drawbar pull was 1,677 pounds. The average drawbar horse power developed was 10.06. A portion of the fuel used tested 40 degrees Baume; the other portion 50 degrees Baume. The total time of plowing was ten hours, 24 minutes. The total number of acres plowed was 8.14.

The field was level and was one from which corn had been cut for silage. There was no delay because of difficulty with either the tractor or the plows. E. A. Hardy, a senior agricultural engineering student, operated the tractor. The test was conducted under the direction of E. M. Mervine, assistant professor of agricultural engineering, who prepared this report.

Figuring kerosene at 10 cents per gallon, lubricating oil at 32 cents per gallon, and the operator's time at 50 cents an hour, the cost of operation was at the rate of 90.5 cents per acre. To this should be added items for interest, depreciation and repairs, which according to the following estimate amount to 69.8 cents per acre.

It was assumed that the owner of a tractor of this size will have work for it forty days each year. This statement is based upon the experience of farmers owning tractors approximately this size.

One hundred and three reports received from Iowa tractor owners in the spring of 1916 contained a group of eight which were from 20 to 25 belt h.p. rating. One of these was used 135 days, another was used 15 days, and the other six were used on an average of 41 days each per year.

On a \$1,000 outfit depreciation was assumed to be 15 per cent. per year.....\$150.00
Interest at 6 per cent. on changing value of outfit, average per year..... 37.50
Repairs at 4 per cent..... 40.00

These fixed charges amount to \$227.50 per year, or \$5.68 per day, for each of the 40 days worked. This amounting to 69.8 cents per acre, making the total cost of plowing \$1.60 per acre.

On a longer field the outfit would have made a better showing, with corresponding reduction in unit cost

per acre. The cost per acre would also be influenced by the care given the machine. A careful operator would reduce the items of repairs and depreciation. Most farmers would reduce the cost of operator's wages by paying a lower rate per hour.

Summary.

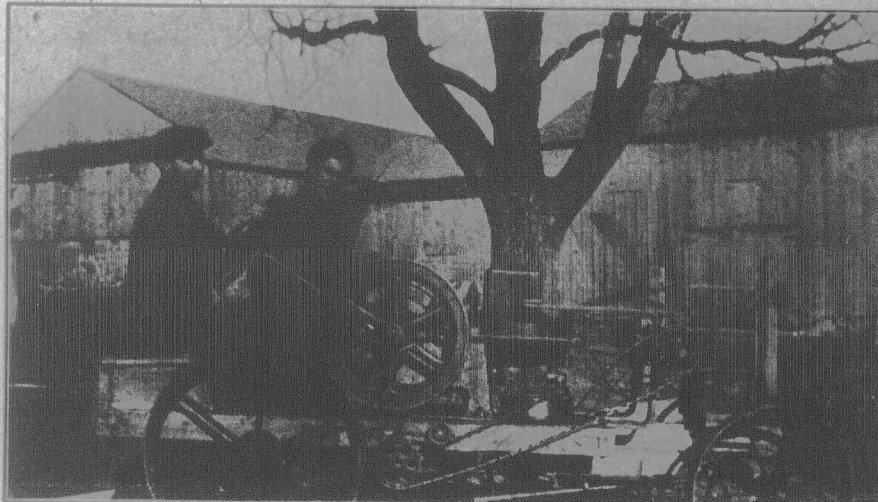
Acres plowed on Oct. 13.....	5.56
Acres plowed on Oct. 14.....	2.58
Acres plowed during test.....	8.14
Time of plowing Oct. 13.....	7 hrs. 10 min. 10 sec.
Time of plowing Oct. 14.....	3 hrs. 14 min. 6 sec.
Total time of plowing.....	10 hrs. 24 min. 16 sec.
Depth of plowing.....	6 inches.
Acres per hour.....	.78
Length of furrows.....	548 ft.—33.2 rods.
Average time for making one furrow.....	2 min. 46 sec.
Average rate of travel.....	2.25 m. p. h.
Average time for making turn at one end.....	.38 sec.
Percentage of time spent in turning.....	18.6
Average drawbar pull.....	1,677 lbs.
Average drawbar h. p.....	10.06 h. p.
50 degs. Baume kerosene used Oct. 13.....	13.26 gals.
50 degs. Baume kerosene used Oct. 14.....	5.37 gals.
Kerosene used during test.....	18.63 gals.
Kerosene used per acre Oct. 13.....	2.39 gals.
Kerosene used per acre Oct. 14.....	2.08 gals.
Kerosene used per acre for test.....	2.29 gals.

Note.—In making application of these figures to our conditions, the higher cost of kerosene and oil and also higher cost of engine on which interest and depreciation must be allowed would have to be taken into consideration.—Editor.

More Gas Used in Fast Driving.

Would you kindly answer this question in "The Farmer's Advocate" as soon as possible.

In running a car a certain distance, say twenty miles, which would use the more gasoline, driving fast



Moving a Gasoline Engine with Its Own Power.

or slowly? In other words, does fast or slow driving use the more gasoline? Your page (or part of one) on auto driving etc., is always sensible and is much appreciated by a great many. COLCHESTER.

Ans.—More gas is used driving fast than in driving slowly. Racing machines consume so much fuel that it is all out of proportion to the mileage attained. The most economical use of gasoline comes from a steady speed of about 25 miles an hour. AUTO.

Holding Car on Hill.

EDITOR "THE FARMER'S ADVOCATE":

I have been reading with interest the articles written by Auto each week in your paper. In your August 30th issue he had an article on driving cars in which he maintains a car can be held on a steep hill without the use of the service or emergency brakes. I would be pleased to have this idea explained through your columns or otherwise. A READER.

Ans.—A car can be held on a steep hill by putting it into gear, and while the engine is not in operation. If the car is facing downhill, put the machine into the reverse gear, and if it is facing uphill, put it into low gear. You can demonstrate this fact for yourself. AUTO.

Gasoline Engine's Own Power Moves it From Place to Place.

EDITOR "THE FARMER'S ADVOCATE":

We had a three-horse-power gasoline engine mounted on a truck, with a sixty-speed line shaft attachment on the rear for running fanning mill, churn, washing machine, pump, cutting box, saw, etc. Owing to the weight of the engine we found it necessary to hitch a horse to it in order to move it from place to place. This did not appeal to us, so we decided to make its own power do the moving. We obtained an old rear-cut mower and stripped it of everything but the gears and drive wheel. We made a frame of 4 by 4-inch maple, long enough to hold the engine and give room for a seat at the rear. The frame was built in two sections; on the rear section the engine and seat are installed. The front section is a long piece of 4 by 4-inch maple reaching from the centre of the rear axle to the front wheels, which are projected enough past the main frame to allow of making a comparatively short turn.

The power is applied to the line shaft by means of a slack belt and idler which acts as a clutch and is operated from the seat. From there a sprocket chain conveys the power to the lower line shaft under the frame, which has on it a miter-bevel gear connecting with the pitman. In this way the truck is propelled. Instead of the mower wheels driving the pitman gear, the pitman shaft drives the wheels.

The steering apparatus is an old auto steering wheel and gear attached to the front axle with a stiff rod. The gas for the engine is controlled from the steering column. It is necessary to have a brake when travelling down a hill. This is made by bolting a wooden disk to one of the wheels and fastening an old harness tug to it to serve as a band brake. The brake is operated from the seat. It is surprising how a tractor like this helps on the farm. One person can operate it and move it anywhere. It pulled a one-furrow plow in sod which was down nine years. It can also be used for harrowing, rolling, disking, drawing farm wagons and implements, besides the scores of belt jobs around the place.

Wellington Co.

W. D. TOLTON.

Canada's Young Farmers and Future Leaders.

Advantages of the Farm.

Many farm boys have a hankering for the city. The bright lights, amusements and their conception of city work appeals to them. They compare the attractive phases of the one life with the disagreeable of the other and do not realize their mistake until the change has been made. After leaving the farm for the metropolis to work out his destiny many a boy begins to see that all is not gold that glitters, that there were bright spots in the country, but, having set his face towards city life he feels honor bound to remain under his new environment. Some advantages of the farm and the requirements of the farmer are set forth in the following paragraphs from "Farm Management" by G. F. Warren:

"The city home cannot readily provide work for boys, hence they are often in idleness when not in school. They see little of their father—their companions being principally boys of their own age. On the farm the boy has companionship with his father as well as with boys. He helps his father at work and feels that he is taking a man's part in the world. As he grows older he learns how to do many things. He has responsibility for the care of live stock. He learns that he must not neglect his stock even if he is tired or desires to play; he learns the value of time. Everyone who is to be of real use in the world must learn to work when he would rather not. No school can ever afford such an opportunity as the farm boy has. He has manual training, responsibility, and companionship with his father, as well as school and play. No wonder that such a boy is better prepared for the world's work than is the boy who never did anything but go to school and play on the street. At the same time that the farm boy is being trained by work, he is contributing to the success of the farm. Occasionally a boy has to work too hard, but very few are injured by farm work.

"Farming is certainly not an occupation for inefficient persons. It requires business ability and skill. Farm work is individual work; each worker has to take responsibility. It is not often possible to give such supervision as can be had in the factory because the number of workers that would be employed under one roof in the factory may be scattered over half a country. Each worker must be a foreman of his own work, and the man who is afraid that he will work overtime is of no use on the farm. The farm hand as well as the owner must be a man who will finish his job. The inefficient person is much better off in the city where he can dig ditches or work in the factory, where he is under constant supervision such as cannot be given on the farm. He will there contribute most to the world and will receive a better reward than he can obtain on a farm. To make a success at farming good commonsense must be exercised."

Thus it will be seen that the farm is considered to be an excellent training school for the world's work. It has advantages which are not available in the cities.

Training For Leadership.

There is nothing surer than that the young men of to-day will be called upon to fill their fathers' shoes and be the leaders of the country to-morrow. The guiding of municipal affairs, the government of the country, etc., will soon be in the hands of the boys and young men who are to-day comparatively care-free, and may not yet have decided on a life work. Their destinies have not been mapped out. Yet, day by day the home, school, church, playmates, etc., are exerting an influence and slowly, but nevertheless surely, weaving into the fabric of the young minds and bodies those things which will develop leadership or else stamp them as followers. There are the two classes, and while the ambition of everyone should be to become a leader in some particular line, too many neglect to make the best use of their time when their minds are plastic and easily moulded. It requires an effort to make oneself do certain things which are known to be for the best, and failure to exert that effort in boyhood when at the studies, play or doing sundry chores, has permitted many minds or brains to work along the line of least resistance. There may be no apparent harm to the youth, but, presto! the boy becomes a man and then the self-control self-effort and training of youth come to the surface. The boy who was master of himself and worked when he would rather play is now a leader among men in some country or urban centre. His advice is sought after; he makes a success of his work, largely because he ac-

cepted responsibility and subjected himself to training when a boy.

Boyhood days pass all too swiftly; almost before he knows it the boy is a man, with a man's duties facing him. Will he acquit himself honorably? Will he be a force tending toward the improvement of his community, socially, financially and morally? It all depends on himself. Boys with every opportunity that money and social position could grant have fallen down at a man's job, while others who were severely handicapped, so far as money and position were concerned, have risen step by step and have won the respect of all. They had to stand upon their own feet as boys, and it has greatly strengthened them for the tasks falling to the lot of the mature man. Lincoln is ever held up as one who applied himself when a boy, and by so doing overcame difficulties brought about by poverty, lack of books, schools, etc. The sons of wealthy parents certainly have numerous advantages, but how many benefit thereby? It is not uncommon to see the boys with patched trousers, whom they shun at school, outdistance them in life's race. By reason of their environment they were called upon to exercise initiative and accept responsibility as boys, and this has developed a strong manhood; the kind that does things while others are talking. There is always room at the top in every walk of life.

Now, boys, don't get the idea that because you are so-and-so's son certain homage will be paid you, or you will receive a preference over others wherever you go. Relying on father's or a friend's reputation has been the means of many boys resting on their oars in their early life, with the result that they develop no stability of character or will power, consequently they fall down under a severe test and are forced to give way to the man who as a boy stood upon his own legs. In this country the poor boy has a chance to make good. The difficulties of youth often serve as stepping stones. Muscle and brain power are developed only by use, therefore, the school boy should work while he works and play while he plays. Going at work or play in a half-hearted way will not make one a leader. The goal of achievement should be set high and then every effort made to attain to it. Putting off for to-morrow what should be done to-day is poor policy and a habit which quickly forms. It lowers a person's efficiency and is not the trait of a leader. Master difficulties now and it will be smoother sailing later on. To make excuses for failure is to accuse yourself. Leave no stone unturned that will aid in fitting you for leadership later on. Remember that it is impossible to make up, ten years hence, for opportunities neglected now. If you fail in life it is not your parents', your teacher's, nor your country's fault so much as it is your own.

THE DAIRY.

The Milk Producer's Problem.

EDITOR "THE FARMER'S ADVOCATE":

According to the custom which has prevailed for some years, the retail milk dealers require the farmers producing milk to contract ahead for periods of seven and five months each year at prices fixed at the beginning of these periods. This custom has, in most cases, worked out to the distinct disadvantage of the milk and cream producer. With hardly a single exception in the past three years the producer has found out before the expiration of the contract period that he was selling his milk and cream without profit and in many cases at a very considerable loss, owing to the rapidly increasing cost of feeds, cows and labor. I venture the statement that where a proper system is kept of ascertaining costs of production that not five per cent. of the farmers in this part of the Province of Ontario have made any money during the past three years in producing and selling milk and cream.

Feed, is probably the most important item entering into the cost of milk production, next comes labor and then price of milk cows. Below we give a table which we prepared from sources which are reliable beyond any dispute, showing the increased cost of production and giving also the increase in prices for milk, covering a period of five years.

Comparative Prices for 1912 and 1917.

	1912	1917	Increase per cent.
Oats.....	\$ 48	\$ 64	33
Barley.....	65	1 22	90
Corn.....	81	1 95	130
Wheat.....	1 07	2 21	112
Bran.....	22 00	36 00	64
Shorts.....	25 00	43 00	61
Corn Oil Cake.....	26 00	49 00	90
Cotton Seed Meal.....	34 00	54 75	60
Gluten Meal.....	20 00	50 00	150
Linseed Oil Cake.....	33 00	59 00	80
Labor.....	25 00	50 00	100
Cows.....	80 00	120 00	

These percentages of increases, not reckoning the prices for cows, show an average increase of 90 per cent.

Comparative Milk Prices, Also Butter and Cheese.

	1912	1917	Increase per cent.
Milk.....	\$1 60	\$2 00	25
Butter.....	26	38	46
Cheese.....	14	21	50

Thus while butter and cheese have increased by 46 per cent. and 50 per cent. respectively, the price of milk at the present price of \$2.00 per can has increased by only 25 per cent.

In the district of Toronto our price was fixed last April at \$2 per eight-gallon can of milk delivered at the dairy in the city of Toronto, which would net to the producer on an average about \$1.80 per can. At the time this price was set most of the producers felt that with prevailing prices of feed, it was not possible to produce milk at this figure but it was hoped that feed prices would be materially lowered during the period. In this they were sadly astray and to-day we find every milk producer in the country selling his milk at a loss and the prices of feed mounting higher and higher.

Two weeks ago the milk producers of this district met in Toronto for the purpose of discussing the general outlook and deciding upon the minimum figure at which milk and cream could be produced during the next seven months. The general opinion was that the producer should have at least \$2.75 per can in order to insure even a living profit. Still clinging to the hope of lower priced feeds, the majority decided on a price of \$2.50 per can. This decision was reached in spite of the fact that the largest and most reliable mills and feed dealers refused to guarantee that the present very high prices of feed would not go higher in the next three months.

Since this meeting the Toronto newspapers have demonstrated to the thinking public and to those who have some practical knowledge of milk production, that the ignorant and foolish are still with us and some of them in high positions.

During the past year our Government and various other institutions such as Boards of Trade have spent probably hundreds of thousands of dollars in their campaigns of "Back to the Land" and "Increased Production", begging and imploring the people to go on the

farm. Why was this necessary? Because farming has not in the past and is not at the present time paying interest on investment and a fair return for the labor expended and yet the Mayor of the city or an alderman of that city has the nerve to place himself on record, through the public press, as being in favor of invoking the aid of all the powers, natural and supernatural, to force the farmer who produces milk to sell it at a price lower than the cost of production—a game of cheap peanut politics being played by men who will prove in the very near future to have been the worst enemies the milk consuming public of our cities have had.

A few years ago some such individuals occupying official positions throughout the State of New York waged just such a campaign against the milk producers of that State with the inevitable result that farmers went out of the business and to-day we find the consuming public of New York face with a serious milk shortage, so serious that agents are busy right now in Eastern Ontario buying all the milk they can get for shipment to New York and are paying the farmers \$3.00 per 100 lbs.

To the milk and cream producers of the County of Peel I wish to say:

First, no power on earth can compel a man to produce something which he must sell at a loss.

Second, if the offer to supply milk for next seven months at \$2.50 per can is not accepted, milk will be selling in Toronto within four months at \$3 per can.

Third, pigs and calves do mighty well when fed whole milk, and butter is in good demand.

To those in high position who would control the prices of what the farmer has to sell, I would say with all due respect and deference, turn your attention to the price of mill feeds and gasoline.

MANNING W. DOHERTY.

President of Peel County Milk Producers' Association.

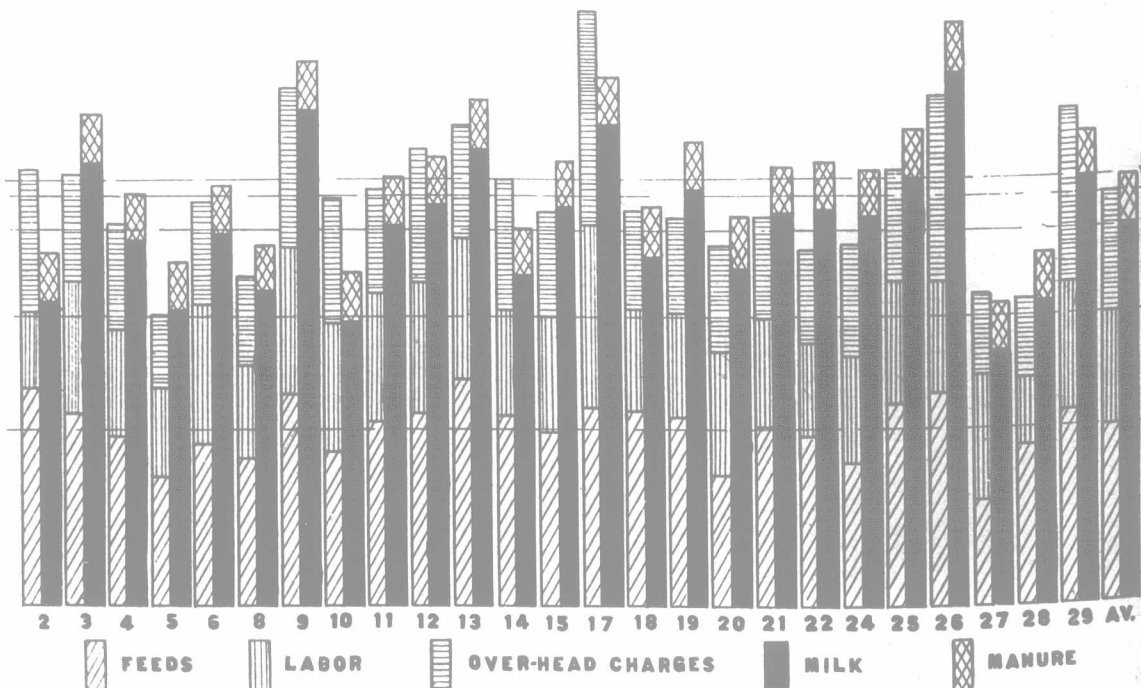
Receipts and Expenditures in Detail on Several Dairy Farms.

Every manufacturing enterprise must have some kind of an account system in order that the manager may know at all times what it costs to produce a certain article. The average selling price must be a little above the average cost in order that the firm may remain in business. Very few farmers have an accounting system, consequently they cannot say definitely which department of the farm is paying the largest profits, or which is causing a loss. Owing to the complexity of farm work, it is difficult to keep an accurate account of every phase of it. It would be necessary to keep tab on every hour spent in the preparation of the seed-bed, sowing the crop, seed, harvest, threshing, fall plowing, marketing the crop through the different classes of farm animals, or at the elevator, the keeping account of the time spent in feeding and sundry work about the buildings, interest, taxes, depreciation in value of stock and building would have to be reckoned, so that the summing up of what a bushel of wheat or oats, or a ton of silage was worth would entail a considerable amount of work. However, the dairy industry occupies a very important place in the welfare of mankind. In spite of what the consumer considers a high price for dairy products, dairymen find it rather difficult to make ends meet when cost of feed, labor, and general running expenses have increased out of proportion to the increase in price of milk.

In order to arrive at something definite regarding the cost of producing milk, the Michigan Experiment Station undertook work in this line in 1913 and the results of their investigation is published in Bulletin No. 277, of the Michigan Agricultural College. A field investigator spent his entire time on twenty-five farms during the years 1913 to 1916, in order to make a study of everything entering into the dairy business. Blank

forms were provided so that each farmer could keep a daily time account and make records of receipts and expenditures. The investigator spent one day with each farmer once a month to obtain supplementary data to complete the history of the month's business. He kept track of the time occupied in looking after the herd during the entire day, and supervised the weighing of the milk. On all the farms where investigations were carried on the production of milk was only one enterprise of the farm work, but none of the other enterprises were considered. The farms on which the study was made represented a fair average of the farms contributing milk to Grand Rapids City.

The expenditures were listed under the following headings: man labor, which included all labor performed in any capacity in the care of the herd; horse labor was used in the hauling of the milk to the city—it cost around two cents per gallon. All the feeds raised on the farm were charged at the price at which that particular feed would sell at the farmer's barn. With the purchased feeds the cost of hauling was added to the purchase price. The pasture land was appraised at its real sale value, and five per cent. was allowed as interest on the investment; to this was added the cost of fence upkeep and the annual taxes. These three items were distributed among the different animals grazing in the pasture. There were certain sundry expenses, which included the purchase of ice, fuel for the heaters, washing powders, etc. There were veterinarian's services and drugs to be paid for. Depreciation on the herd was figured at five per cent. on the value of the animals, interest was figured at six per cent., and the taxes amounted to one per cent. on the value of the animals. It was found that it required ten per cent. per year to provide for insurance, taxes, interest, repairs and de-



Graphic Chart Showing the Expenditures and Receipts per Cow on Each of the Twenty-five Dairy Farms Included in the Survey.

preciation on the buildings. The data kept showed that an allowance of twenty-five per cent. had to be made for depreciation alone. Certain losses occurred yearly in the herd. Fifty cents per month per cow was allowed the owner for his supervising ability. The following table gives an itemized account of expenditures per cow as found by the investigator in 1914 and 1915:

	1914	1915
Total number of farms.....	25	25
Average number of cows for year.....	459.46	428.57
Expenditures.		
Man labor.....	\$28.68	\$27.19
Hauling milk and other horse labor, including R. R. transportation when necessary.....	15.54	14.77
Feeds:		
Roughage.....	31.02	30.38
Concentrates.....	28.61	26.68
Pastures.....	8.36	7.66
Cash sundries.....	1.96	1.77
Veterinary services and drugs.....	.86	.99
Taxes, interest and depreciation on herd.....	9.88	9.49
Taxes, interest, insurance and depreciation on buildings.....	8.72	10.33
Depreciation on barn tools and dairy utensils.....	.50	.48
Actual losses from tuberculosis and other deaths.....	1.95	6.25
Added earning power of owner due to knowledge, experience, and interest in excess of that possessed and used by ordinary labor.....	6.00	6.00
Added risk due to instability of market for product as whole milk, which in single year may amount to 30 per cent., and in one year out of every five years would be 6 per cent.....	8.47	8.30
Total.....	\$150.57	\$150.29

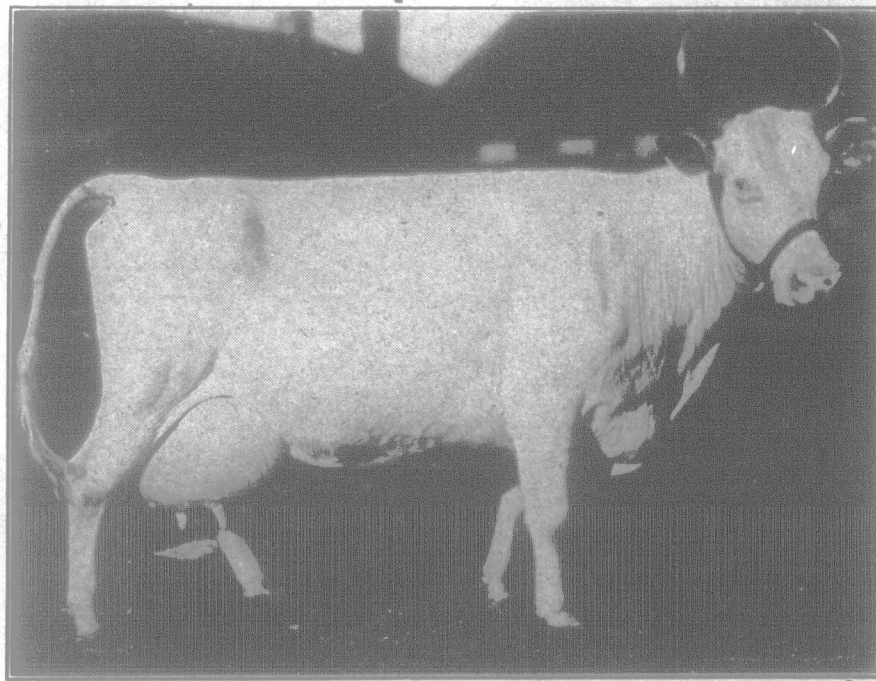
All the milk produced by the herd throughout the year was credited to the receipts; all that was used in the household or fed to the calves was kept track of, as well as that marketed. A value of \$1.50 per ton was placed upon the manure, and it was estimated that a 1,200-pound cow would void approximately twelve tons of manure in a year. The value of the calves at birth was allowed to offset the service charges for the bull. The average number of pounds of milk produced by the cows in the twenty-five herds was 6,928 in 1914, and 7,156.8 pounds in 1915. The average price per gallon of milk delivered in Grand Rapids in 1915 was 16.25 cents, and the cost of producing a gallon of milk was 15.39 cents, which left a net profit per cow of \$6.31, as the foregoing table showed the total expenditure of a cow to be \$150.29. It may be interesting to know the way the time requirement per day for the care of the cows was divided up. Fifty-seven per cent. was devoted to milking, 12 per cent. to feeding, 1 1/2 per cent. to cleaning cows, 16 per cent. to cleaning barns and other care of cattle, 10 per cent. to care of milk and dairy utensils, 2 per cent. incidental labor, and 1 1/2 per cent. to business management.

The cattle were well fed and as economically fed as conditions would permit. The average yearly food requirement per cow was: Succulent feed, mostly silage, 7,729 pounds; dry roughage, including bedding, 3,321 pounds; grain, 2,342 pounds. Pasture was valued at \$7.98. Feed comprised 45 per cent. of the expenses, labor 30 per cent., and overhead charges 25 per cent.

The accompanying graphic chart shows the receipts and expenditures in the different herds. At the right hand side the columns show the average which is \$64.72 for feed, \$41.96 for labor, \$139.01 for milk, \$43.61 for overhead charges, and \$17.59 for manure. A line crosses the chart at each of these averages which facilitates making comparisons of the receipts and expenditures of the different herds. It will be noted that there are two columns for each herd; the left hand column denoting the expenditure and the right hand column the receipts. In a number of herds the expenditure was considerably greater than the receipts; for instance, herd No. 2 had heavy overhead charges and was considerably below the average in milk production. Herd No. 17 had a heavy milk production but there was considerable loss owing to labor and overhead charges being excessive. Many of the herds run about the same in regard to feed, but there is a vast difference in the production of milk and in the cost of running the business. In order that dairying may be profitable, it is necessary to keep a finger on overhead charges. The cost of labor, feeds and investment, and the system of management are important factors. The buildings should be arranged so that the work may be done as easily as possible. The aim should be to keep high-producing cows. Some dairymen have a large sum invested in buildings and equipment which makes the overhead charges excessive. Moderate buildings and equipment and systematized labor are more conducive to profit. Under present conditions in Canada, the cost of feed and labor would be greater than the figures given. The information was collected on a number of farms where the average number of cows was about 20 per farm, consequently the information secured by the investigator conveys some idea to Canadian dairymen of the weight of feed a cow consumes, the time it takes milking, feeding, doing sundry chores, etc. The figures also show that when every item of expense is considered there is not a very large net profit with cows yielding between 7,000 and 8,000 pounds of milk. The cost of production is a matter which we believe should be given

more consideration by dairymen and stockmen. What it costs to produce an article must be known before a price can be set that you know will give a profit. It is much more difficult for a dairyman to figure cost than it is for a factory owner, and it is also more difficult for dairymen to get the price they should for their produce than it is for organized industries. Nevertheless the more a man studies his business and keeps track of details the better he can block wastes and rearrange the work to increase the net profit. The information secured by colleges and institutions relative to cost of production convey some idea as to the cost of performing individual tasks on the average farm. Try to strengthen the weak links in your business and so improve the whole enterprise.

Between July 25 and September 11, twenty Ayrshire cows and heifers qualified in the Record of Performance test. Of this number only three had a test lower than four per cent. Daisy of Ferndale was first in the mature class. Her total production being 11,267 pounds of milk and 467 pounds of fat. Floss of Fernbrook 2nd was the only four-year-old to qualify; she produced 8,863 pounds of milk and 360 pounds of fat. Aggie of Darroch headed the three-year-old class with 9,148 pounds of milk and 366 pounds of fat. In a class of seven two-year-olds, April Blossom was first; her milk yield being 7,619 pounds, producing 360 pounds of fat. All the two-year-olds tested over four per cent.; two of them going as high as 4.27 per cent.



Mountain Lass.

Senior and grand champion Ayrshire female at London for A.S. Turner & Sons, Ryckman's Corners, Ont.

POULTRY.

Chopped Table Scraps For Chicks.

EDITOR "THE FARMER'S ADVOCATE":

Not long ago there was an item in "The Farmer's Advocate" saying that a good mash for little chicks can be made by putting bread scraps through a kitchen chopper, with green stuff, adding bran or cornmeal. This worked so well for a few chicks that we have kept it up with a back-yard flock of twenty-five fowls of all sizes. It will commend itself to the tidy housekeeper. All table scraps, and indeed everything having a known food value that would otherwise be wasted is run through the chopper which is kept set up near the sink. This converts unsightly odds and ends into a cleanly mash, or rather dry hash, which is kept in a covered bowl until noon, when it is mixed with bran, moistened if necessary, and fed. Judging by the fuss the birds make over it, and the rapidity with which it disappears, it must be to their liking.

For little chicks we were careful to use bread with lettuce and cress, but now everything eatable goes in. The mash varies from day to day, which is probably an advantage. It includes meat, with bits of gristle and fat which hens would otherwise pick over and waste, also vegetable scraps and fruit. The latest ingredient has been windfall apples, worms and all. I was not quite sure about these, as they looked very hard and green, but there have been no complaints of any sort. We have not seen a sick chick nor lost one since hatching. Of course, they have a good grain ration night and morning, and clean housing, with a large run under apple trees. The youngsters have been growing like weeds, and seven laying hens are giving two dozen or more eggs per week.

The question is, whether this idea would be of use on a larger scale. A kitchen chopper will take care of the scraps of a small family, but for a commercial flock a large machine would be required. The idea is not to pulverize the stuff, but to reduce it to pieces about the size of a grain of corn.

It is clear that chickens do not require soft food, being well fitted to digest substantial rations, but they cannot chew, and the use of soft mashes has, no doubt,

been due to the need of presenting some foods in a form that they can tear to bits. Mr. Jull's article in your issue of Aug. 30 does not favor sloppy mashes, and I should think that roots, vegetables and fruits that can be chopped or shredded might well be fed in that way. From now on, cull apples will contain a fair amount of sugar, and if chopped would make good roughage. Also beets and turnips are recognized as good for winter feeding, usually being given whole for the birds to pick. Of course, such things have no such feed value as good grain, but the need of economy in grain feeding this year will lead to a good many experiments. In any case chopping the table scraps of a small family is an easy thing to do, and it undoubtedly makes the stuff more palatable and effects economy, every particle being eaten readily.

Lambton Co., Ont.

WILLIAM Q. PHILLIPS.

Mixing the Ration in Crate Feeding.

Various rations may be fed to birds in the crate. Never, however, should whole grain be given. All feed should be ground just as fine as possible. A mixture of grains gives the best results in that the birds do not tire of a variety as soon as they do of one feed. Their feed should all be given in a wet state, mixed to the consistency of porridge, so that it can be poured from a pail or dipped out with a flat ladle or shingle. The best mixing material is buttermilk. Skim-milk comes next. Better results will be obtained when the milk is sour and mixed one feed ahead. A little salt added to the mash makes it more palatable, and the chickens will eat more of it. Corn, oats, barley, buckwheat, wheat, etc., all can be used to advantage, but should be ground just as fine as possible and the coarser hulls removed. If milk is not procurable and water has to be used for mixing, 5 to 10 per cent. of animal food, such as beef scrap or blood meal, might be added to the grain mixture. Soup made from boiling beef heads can be used in this connection, but none of these give as good results as the milk, and they are advised only when the milk is not to be had.

In the production of flesh of the best quality, milk is of prime importance. The birds are not only fond of feed mixed with milk, but can take more of it, and will

stand heavy feeding for a longer time if milk is used for mixing. Milk gives a white or bleached color that some American markets do not like, but, there is no doubt that the white flesh as it becomes better known will be more appreciated.

Where the white flesh is not objected to, oats, finely ground, are often used as the principal feed. Oats add to the whiteness and produce a flesh with the globules of fat evenly distributed throughout the tissue. This being the case, oat-fed flesh will not waste in the oven as much as flesh that has been produced from feeds rich in fat, such as corn.

Corn is a very popular feed, the price in most cases is reasonable, it is palatable, and it produces the weight. If yellow corn is fed, the flesh is a rich, yellow color which many markets prefer; but when corn is fed alone it does not produce as good quality flesh as when it is mixed with oats. The corn-fed flesh is really more fat than flesh, and in roasting will shrink more than the oat-fed product.

Buckwheat is very palatable and a good fattener. If fed alone, or when it is the chief ingredient of the ration, the tendency is for the flesh to become more or less flabby, and the bird when dressed lacks the lustre and finish that crate-fed birds should have. An experiment in feeding wild buckwheat screenings to birds in the crates was conducted at the Experimental Farm, at Ottawa, and it was found that they were a very superior feed for that purpose.

Shorts, as a small part of the ration, make a good feed. When fed in large quantities they make the feed too pasty. Bran is not popular for crate feeding. It is laxative in character and contains too much fibre to the amount of fat. Beef tallow is sometimes used during the last four or five days of the feeding period. It has been thought to improve the quality of the flesh. This, however, is doubtful. It produces the surface fat that helps round out the carcass, but, owing to its cost, the trouble of feeding, and its doubtful value, many feeders have discontinued its use. Cooked feeds, as a rule, should not be fed. Experiments have shown that they are not as economical as those fed raw.

In mixing a ration for crate feeding one of the first things to consider is the palatability of the feed. If the birds do not like it, they will not eat enough to put on the flesh. Next to this comes the composition of the feeds and their cost.—From Dominion Bulletin No. 88, "Preparing Poultry Produce for Market."

Poultry Feed Situation.

The egg and poultry markets report for the week ending September 25 contains the following relative to the poultry feed situation: Some important developments have taken place during the past week which should have an important bearing upon the poultry and general live-stock feed situation throughout the Dominion. An order-in-council has been passed prohibiting the export of screenings except under license. In light of the above a brief description of the origin and nature of screenings may be of interest at this time. The wheat from the western wheat fields is for the most part handled in bulk. Except at the Government elevators and at the flour mills very little cleaning takes place at interior points. This is practically all done at Fort William and Port Arthur. Only wheat at present is cleaned. The screenings at the first separation consist of the small or broken kernels of wheat, wild buckwheat, oats, barley, flax, chaff and weed seeds. These are further separated into three grades:

A. or buckwheat screenings, being composed of whole or broken wheat, buckwheat, flax, some oats and barley and a small percentage of the larger weed seeds.

B. composed of weed seeds, mustard, etc.

C. composed of chaff, some grain and dust.

It is the "A" or buckwheat screenings that is being recommended as suitable for feeding purposes. The following analysis of a sample as submitted has been supplied by the Seed Branch: wheat, 47.0 per cent.; oats and barley (chiefly oats), 6.8 per cent.; flax, 1.42 per cent.; wild buckwheat, 36.52; wild oats, 2.52 per cent.; weed seeds, 2.18 per cent.; chaff, 3.56 per cent. The samples vary somewhat, some having shown as high as 55 per cent. wheat with a corresponding reduction in buckwheat.

THE APIARY.

Bees in Combless Packages.

There are only three methods used at the present time for shipping bees (excepting queens), from place to place as an article of commerce: (1). Full colonies; (2). Nuclei; (3). The combless package. A full colony as sold by a dealer in bee supplies has six to eight frames of brood, a young vigorous queen and a small supply of honey and pollen, with sufficient bees to fill the spaces between the frames. A nucleus, as the name suggests, merely consists of a small colony and may consist of one, two, three or five frames of brood and bees. This smaller package was introduced to overcome the heavy transportation charges which were incurred when shipping a full colony. Nuclei are now shipped in special cases instead of the hives themselves which reduces the transportation cost much more. The latest method of shipping bees—the combless package—is a further effort to reduce the high initial cost of bees and transportation and involves the shipping of bees in wire cages without even comb or brood.

Indeed, the shipment of bees in combless packages is about the latest development of importance in commercial beekeeping. It is so new that extensive beekeepers have hesitated to order bees in quantity for fear of failure, until trial shipments were made. So successful were the trial shipments, however, that, this year, for the first time, large orders have been placed with the shippers and the possibilities of the shipping of bees in packages are just beginning to be realized.

Since most of the orders are for delivery in April and May the package business is highly developed in the South. Because of the long breeding season and the mild winters the Southern States are peculiarly adapted to this branch of beekeeping and it may be expected to become increasingly popular there. The packages are filled in the middle of the day when the old bees are in the field. In this way mostly young bees are shipped. This, under favorable conditions, insures their safe arrival and also that there will be no dwindling before the bees have time to rear brood.

It requires more capital to venture into a pound package business than is needed for any other branch of beekeeping. The season is comparatively short and the shipper must have a large number of colonies to draw from. He should first be a queen breeder, since he can hardly depend upon buying queens in sufficient numbers to fill orders. Most orders are for bees with queens since they are required to build up to strong colonies for the main honey flow. It has been found that there is a greater loss of queenless bees in transit where the bees are shipped with the queen.

The two main uses for the combless package are:

(1). Where the beekeeper wants to increase the number of colonies under his control in spring, and who is looking for a crop from the same that season.

(2). To strengthen the weak colonies in order that they may build up into good strong colonies for the honey flow.

Where increase in spring is desired, and the packages are received about May 1st, it is quite easy for them to build up into full, strong colonies in time for the clover flow, when provided with full drawn comb and good stimulus (a steady flow of nectar and pollen.) However, if received late in May, if the buyer has no drawn comb, or if the stimulus is poor, then full colonies cannot be developed in time for the clover flow.

But the combless package comes into its own for the purpose of strengthening the weak colonies in spring. Colonies which are weak in spring are weak in bees and not in brood. At this time of the year the queen is seen to expand the brood nest and she is only limited by the flow of nectar and pollen and by the number of her

attendants. Instinct forbids her to lay more eggs than the worker bees can care for and keep warm, hence it is useless to add more brood. The queenless package serves the purpose admirably and supplies the colony with young worker bees.

Probably the greatest advantage of the combless package to the buyer of bees is the fact that he is sure of not introducing disease in his yard. Since the packages come from the South, it requires over three days for them to reach their destination and thus the bees are automatically treated for foul brood en route. The bees have no combs in which to deposit any honey they may have in their honey sacs at the time they are shaken into the cage, and they cluster and consume it while travelling.

The importance of the introduction of the combless package trade in commercial beekeeping may be recognized, when many extensive producers in Canada are considering the question of extracting all their honey in the fall and buying bees from the South the following spring, rather than winter the large number of bees necessary for their extensive operations. They figure that it requires at least four dollars worth of honey or sugar syrup to carry each colony through, and for the same cost a three pound package of bees with a queen may be bought and thus eliminate winter losses. A few have experimented in a small way with this idea in mind and some have been definitely convinced by the results obtained that it would pay. However, this plan is not yet possible on any extensive scale because no sufficient source of supply is yet available. It is now, at least, a proven fact that it is as cheap to buy bees in packages and place them on combs in spring, as to make late increase to winter over.

The beekeeper who desires to make heavy increase should aim to produce as many drawn combs as possible during the honey flow and then buy the bees the following spring. The buyer assumes no risk as the shipper guarantees their safe arrival.

In conclusion, the business is yet in its infancy and no one can foretell what its ultimate development may be. As yet the experimental stage has not been passed. There is no standard cage and the feed in some is supplied from the top of the cage while in others from the bottom. The feed, of course, is in the form of candy of just such a consistency that it is not too soft to muss up the bees and cage, nor too hard to cause the bees to die from lack of food. Last year many packages died from starvation, over long journeys due to delay at the Custom's office and poor transportation facilities. This year this defect has been remedied by the use of a larger candy container and by better arrangements with the Custom's officials. Other improvements are still to be made and the combless package may eventually prove to be the biggest factor in modern beekeeping.—W. F. GEDDES in O. A. C. Review.

HORTICULTURE.

Reasons for Poor Sets of Fruit.

When there is no bloom in the orchards growers expect no fruit, but it is rather disappointing to have a full bloom and then see the petals fall leaving nothing of promise on the trees. The reasons for this phenomenon are probably numerous, but outside of severe unseasonable frosts experimentalists are more or less at sea to explain the causes of blossoms but no fruit. A wide study of conditions by the various horticultural stations throughout Canada and the United States point to the destructiveness of heat and cold not evenly distributed over the period when the blossoms are open. U. P. Hedrick, of the New York Agricultural Experiment Station writes lucidly on this subject, and his explanation has a direct bearing on the weather conditions that existed last spring over a considerable area in Western Ontario where the apple crop is light. The two paragraphs which follow are from the pen of Prof. Hedrick.

"There has long been a question in the mind of the writer as to whether the set of fruit might not be more or less influenced by a difference in the hastening or retarding effect of temperature on the two essential organs of flowers. The pistil, the female organ, and the stamen, the male organ, seem to be affected in different degree by cold and heat. Thus, all know that the pistil is often injured by a light frost which does no harm to the stamen. A considerable amount of work in cross-pollinating at this Station has led to the general observation that very warm weather leads to a more rapid development of the stamen than of the pistil. Not infrequently in exceptionally hot weather it will be found that the stamens have developed much more rapidly than the pistils—that the anthers have burst and lost their pollen before the stigmas are receptive. On the other hand the stamens develop least rapidly in cold weather. May not this unequal response of stamen and pistil to heat and cold be one of the causes of the uncertainty which attends the setting of fruit even when trees blossom well? Here is an important problem for some student of blossom biology.

"Rain during blossoming time, as we have shown in Bulletin 299 from this Station, is a frequent cause of a poor setting of fruit, doing damage oftener than frosts in New York. Usually the injurious action of rain on blossoms has been ascribed to the dilution of the stigmatic fluids or to its removal by washing out. During the current season Mr. W. F. Friedman, a student assistant at this Station, has found that pollen grains of practically all fruits burst and will not germinate in water. From his work, extending through the whole of the blossoming season of 1915, there can be little doubt but that the action of rain on pollen is quite as potent

in preventing a set of fruit as is its injurious effect on the stigmatic juices."

In an address before the last Ontario Fruit Growers' Association, Prof. Macoun, Dominion Horticulturist, explained that should the temperature run fairly regularly below 70 degrees F. during the blossoming season fertilization is not likely to be good. Extensive experimental work has shown that not only is moderately warm weather necessary during the blooming period but that bright, sunny weather is desirable also, and a long spell of cool, wet weather beginning when the flowers are open is very unfavorable to pollination.

A cool, northeast wind during the period when apple trees are in bloom used to be looked on very unfavorably by the apple growers in the Annapolis Valley. It was said to "blight" the blossoms. After spraying became more general crops were surer, nevertheless there might have been some detrimental effect arising out of the prolonged cool spell occasioned by such winds. Considerable uncertainty accompanies the pollination and fertilization of the blossom, which depends not only on the weather conditions of the time but upon the tree itself and what it has undergone during the preceding season.

Select Seed Potatoes This Fall.

The importance of seed selection has impressed itself on every progressive farmer. It is an insult to a well-prepared seed bed to deposit in it seed that carries with it no pride of ancestry or no promise of productiveness. Potatoes are, perhaps, the easiest seed to select for one can handle them and see that they are the right type and clean. The common practice is to obtain the seed potatoes from the bin in the spring at planting time, but this is not the most expedient method, nor does it insure the best results. It is the easiest way no doubt, but very rarely is the easy way the best. The great disadvantage with bin selection is that one knows nothing regarding the parent of the tuber chosen. The parent plant might have produced one lone tuber, perhaps only two or three, in which case it is a bad strain to breed from. In selecting a sow pig for a breeder one usually chooses from a large litter, knowing that the progeny of a fecundant female is likely to inherit and transmit still further the breeding characteristics of its dam. Bin selection of potatoes is like picking a sow pig out of a deckload on the market, not knowing whether it was one of a litter of thirteen or a litter of five. Plants, like animals, inherit and transmit certain tendencies and characteristics so the parent should be known in one case as well as in the other. Hill selection is the way out of the difficulty. Choose from hills, the plants of which matured about the same time. This will tend towards uniform ripening in the succeeding crop. Type is the next thing to consider for varieties are now becoming well known and conformance to the standard type for the variety indicates purity. Next choose from those hills that have a large number of tubers on each plant for in this way the yield can be materially influenced in the succeeding crop. Possibly the lone potato in a hill will be the most attractive one individually, but unproductiveness will be propagated and encouraged by the use of it for seed. This is where hill selection excels the method of selecting from the bin. Anyone interested in their potato yield should spare the time this fall to set aside their seed potatoes for next season.

Growing Apple Trees From Seed.

EDITOR "THE FARMER'S ADVOCATE":

I have some good apple seeds which I should like to plant. Kindly advise me concerning the time and manner of planting and also regarding transplanting same.

G. M. G.

Ans.—When imported apple seeds are used they frequently arrive in the winter and are planted in the spring. In the meantime they are soaked for three days in water, the water changed twice a day, after which they are stored in small bags between layers of ice. As soon as the land is fit to work in the spring they are planted. Good results can be obtained from planting apple seeds in the autumn, or very early spring. They usually germinate better when sown in the autumn. When it is not convenient to plant them then they should be stratified, or, in other words, mixed with moist sand (not wet) and kept in a cool, dry place until spring. It is not well to plant apple seeds in the autumn in land that heaves badly. Select a deep soil, that is, where the hard-pan does not come close to the surface, and stir it up thoroughly to a depth of 8 or 10 inches so the tap root will have a chance to develop. Prepare the land and fertilize it well, then sow the seed about 1 to 2 inches deep in rows from 2½ to 3 feet apart. If only a small quantity is to be planted, small beds will be just as good. With thorough cultivation they should make a growth of from 1 to 2 feet the first season. The next spring they should be transplanted into rows from 2½ to 3 feet apart and 12 inches apart in the rows. The following spring they can be planted in the seedling orchard. Seedlings of the apple do not come true to variety so it is necessary to bud or graft some known variety on to the stalk produced from the seed, unless one wishes to conduct an experiment for his own enjoyment. For root grafting the seedlings are taken up during the autumn and healed in moist sand in a cool cellar. They are grafted during the winter, after which they are stored in moss or sawdust until spring; then they are planted in the nursery rows, about 1

foot apart in rows 3 feet apart. The graft or union is set about 3 inches below the surface of the soil. They are usually allowed to grow here for two years and are then set in the orchard.

Ideas Regarding the Treatment of a Farm Orchard.

EDITOR "THE FARMER'S ADVOCATE":

It has been customary for many years for Institute speakers to wax eloquent upon the neglect of farm orchards and to show enormous profits when small orchards have been handled by experts or demonstrators. Still the hard-headed farmer has gone his own way and paid no attention to the frenzied appeals for though he could not probably explain why, he could sense something wrong in all this gratuitous advice. The first note of common sense that I have heard on this subject was sounded by Prof. Crow, at the Experimental Union, in discussion on a very successful demonstration on a small orchard. He said that most farmers neglected their orchards and that what the majority of farmers did was usually the right thing, and that we should go out and find out why the farmers neglected their orchards. He also said that we did not yet know what kind of farming would nick well with orchard work. Until we have some more definite information on this point, I would give the following rules for handling the farmer's small orchard: Don't plow, don't prune, don't spray.

Why not plow? Nine times out of ten, with the pressure of more important work, it is done too late in the season and no regular cultivation is given, which I consider is worse than no cultivation. Also, the successful farmer has the theory of deep plowing so thoroughly instilled in his nature that it is impossible for him to plow an orchard and not root it up like a piece of fresh-cropped land in New Ontario, which is all right for brush but bad for apple trees.

Why not prune? The farmer does not understand it and I doubt if it will pay him to spend the time learning. He had better spend his time studying the production of more milk, better hogs, cattle or sheep. He will hire someone who has a village reputation as a tree butcher. A drive in any district of Canada will show orchards that have been ruined by these so-called professional pruners. It is practically impossible to get a capable tree pruner outside of the orchard districts, and if it were possible the farmer could not distinguish between a real expert and a so-called expert. For this reason the average orchard is much better left unpruned. I would, of course, advise the cutting out of suckers, dead limbs, branches which touch, etc. This is not pruning and anyone can do it.

Why not spray? It will neither pay the farmer with a small orchard to buy spray pump, assemble chemicals and study the matter, which to an orchardist is a simple operation but to the busy stock and grain farmer is a big matter, nor take his teams off the land at a busy time on the farm. If he depends on travelling outfits, two-thirds of the work done is money wasted, owing to the short season for the most important sprays, as it is done either too early or too late.

Now a few lines on how to handle the farmer's small orchard. First, cut out dead wood, suckers and branches that touch, but don't attempt to prune. Next, build a solid fence around the orchard and connect with the barnyard by a lane or paddock, so that stock can be easily turned in or out. Next, give it a light coating of manure and do this every year until too rapid growth ensues, then apply every second or third year as necessary. Turn sheep, young dehorned cattle, or horses in for half a day at a time or often enough to keep the grass reasonably short. If hogs are put in have them well ringed to prevent rooting. After the apples are well formed only sheep or hogs should be allowed in. Spend a few hours picking off wormy, scabby and misshapen fruits which will make excellent sheep and hog feed.

One last don't—don't make a pasture of the orchard, as the tramping of the ground, especially in wet weather, will injure the trees; also, after the stock have finished feeding they should be turned out or they will damage the trees by tearing the bark, rubbing against the trees, and, with cattle and horses, eating the leaves and small twigs.

If an orchard is handled in this way there will be enough pasture obtained to pay rent and expenses, and in an average year there will be a medium crop of fairly clean fruit.

Grey Co., Ont.

G. T. MARSH.

[Note.—We cannot agree with all the statements of our correspondent in this article, but his arguments are so well founded that they deserve space. The size of the orchard must ever be an influencing factor. Very rarely can fruit from an orchard not pruned or sprayed be marketed to advantage, so the surplus is a waste product and the trees become a breeding ground for insects and fungous diseases that will infest the neighborhood.—Editor.]

The silo may not be as well filled as usual, but those who have a field of roots, kept clean, have little to fear, and hay and straw is abundant.

FARM BULLETIN.

Household Conveniences for the Rural Home.

No longer need country folk envy their city friends the many home conveniences, such as running water, bathroom, sewage disposal, electric lighting, etc. The inventive mind has made all these things as applicable to the farm home as to the city dwelling. The city with its elaborate water and sewage disposal system traversing every street cannot give any more efficient service than it is possible to obtain in any rural home. The plant to furnish city conveniences in the country is not difficult to install, nor is it as expensive as is commonly believed. There are few farm houses so situated as to make the installation of running water and a sewage-disposal system impossible; why is it then that the women folk on the farm are obliged to carry water from the farm well, situated very often several rods from the house, or why is health endangered by the open closet located from fifty to one hundred feet from the dwelling? It does not take much persuasion to have water piped to the stable to save the stock from being exposed to inclement weather while getting a drink, but when the question of piping water to the house is broached it is not favorably considered by some men. "We cannot afford it" is the common excuse for not putting sanitary equipment in farm homes. This may be true in some cases. However, not enough consideration is given to lightening the work and giving more comfort in the

outlay will furnish sanitary surroundings and comfort? It will be money well invested, and once the conveniences are installed you will wonder why you did not put them in your home years ago.

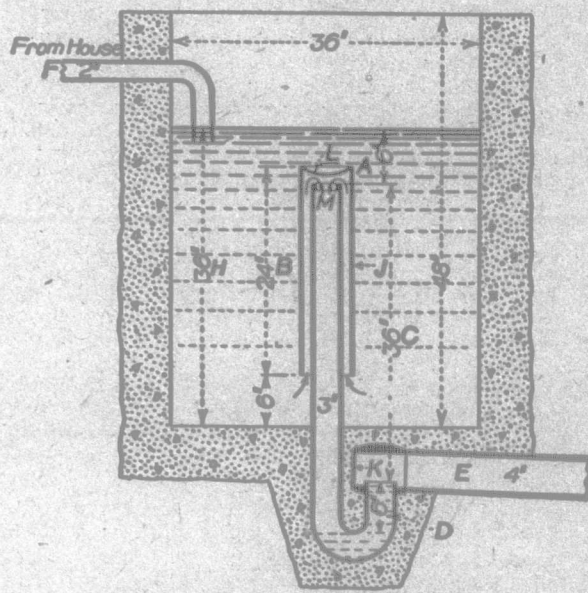
There are different styles of septic tanks which give entire satisfaction. At first it was thought essential to have an automatic valve installed to prevent the continuous flow of water through the discharge tile, but recently it has been found that a siphon which works intermittently is as effective and is less expensive. For the ordinary household a cement tank six feet long, four feet deep and four feet wide is plenty large enough. Some recommend a much smaller tank. Where the valve is used a portion of this tank could be partitioned off. It is claimed that for every occupant of the dwelling there should be at least three cubic feet of space in each compartment, and for each cubic foot of space in one compartment there should be thirteen feet of four-inch field tile laid at a depth of from twelve to fifteen inches, according to the nature of the soil. However, it does no harm to have a larger tank and to put in more tile. In the first tank solids are liquified by the work of bacteria and the material flows to the second tank through a pipe which starts near the bottom and empties within a short distance from the top. When it rises to a certain height in the second compartment the valve, if there is one, is opened which allows the liquid to escape with considerable force through the tile. If a siphon is used in place of a valve, water does not flow until it reaches a certain height so that the principle of the two systems is similar. The quantity of water going into the tile at once tends to keep them clean, where a gradual stream would tend to clog them. It does not require an expert to build this tank or lay the tile.

Four-inch concrete walls, mixed in the proportion of one to seven or eight would be strong enough for the tank, and it can be built close to the house. On account of having the discharge tile near the surface, the tank cannot be sunk far in the ground. However, it can be banked around with earth which will prevent the frost from doing any damage. A cement or wooden top could be put on and the entire tank covered. A couple of cubic yards of gravel and a barrel and a half of cement would be sufficient material to construct the tank. If the tank is located near a surface well sewer pipe should be used and the joints cemented to carry the material some distance from the house before it is emptied. The tile should not be laid too deep, nor too close together, as the soil is supposed to absorb the effluent. For this reason the tile should not be laid on too steep a grade in order to avoid the collecting of material at the lowest point. They should be laid practically on the level through the garden or nearby field; in fact, we know of tile laid through an orchard which are giving satisfaction. However, there is a slight danger of the roots of the trees clogging the tile. This system will not work in water-logged soil, as under these conditions there would be no possible chance for the tile to empty. Where the water level comes close to the surface it is advisable to underdrain the portion over which the discharge tile from the septic tank are to be placed. If the drainage system is laid six or eight inches below the septic tank tile, satisfaction would be secured. Bacteria in the soil further works on the sewage, rendering it entirely harmless.

The accompanying illustration shows a tank three feet wide and four feet deep, with an intermittent siphon in place of a valve. The operation of this siphon is as follows: Fill the U tube with water to the level of the short length, then let the tank fill up in the regular way. After the water level rises above the open bottom of J any further rise will compress the air in J and in the long length of the U tube. This force will drive the water down to the level shown in the sketch; then, when the water level gets to a height so that A equals D, or slightly greater, the compressed air in the long tube will force the water out of the shorter tube and siphonic action will begin with a rush which will empty the tank. Some have installed the system with the discharge pipe starting near the bottom of the tank and extending to the top, where it is turned downward and connects directly with the tile. This permits of a gradual escape of the effluent, but there is danger of the tile clogging. The valve or intermittent siphon allows the tank to fill and then empty with a rush, thus flushing the tile.

The sink, bathtub and commode should all be connected with the septic tank where bacteria will do its work, thus creating more sanitary surroundings. The convenience of the urban dwelling, so far as water supply and sewage disposal are concerned, can be installed in the farm home. The expense is not prohibitive. In the majority of rural homes running water, bathroom and closet can be put in without any changing of partitions. A small bedroom can be turned into a bathroom, or else a part of a large room partitioned off. Some prefer to have the piping concealed in the partitions, but to do this in a house already constructed would necessitate added expense and possibly cause damage to the walls. If the pipes are placed in a corner, a board extending from ceiling to floor and papered or painted to match the rest of the room will serve to conceal the piping without undue labor or expense.

No doubt there are many things needed about the barn or farm to lighten the work now that labor is scarce. However, the women folk should receive first consideration. Domestic help was never so hard to get as now. Many men seem to forget that conveniences in the house are as essential, or more so, to the general welfare of the family as some of those purchased to facilitate outdoor work. Sanitation and comfort in the home should be provided.



Intermittent Siphon System.

house. Too many men invest only in equipment in which they see a monetary return and pay little attention to things which are of vital importance to their wife and growing family. Perhaps this is due to the fact that for many years conveniences as mentioned were only available in towns or cities. The farm home was isolated from the large water and sewage systems; now it is possible at small expense to have individual plants on practically every farm. A bounteous harvest has been garnered this year so surely the desire of the women folk to have things a little handier in the house can be granted this fall.

Where the water is pumped by windmill or gasoline engine it is a simple matter to have it forced to a tank in the house so that instead of tramping through snow every time a pail of water is wanted a supply could be secured by turning a tap. The expense would depend largely on the distance of the well from the house. If the supply tank be located in the attic it would furnish pressure for a flush box and commode when the sewage system was installed. By having a twenty-five or thirty-gallon tank connected by inch piping with the cook stove or furnace, hot water could be secured in the bathroom, basin, kitchen sink, or any room in the house, so long as the fire was on. A tank of this size heats in a short time and will not become cold even if the fire does go out at night. We know of farmers who had the piping cut the desired lengths by the plumber and then made all connections themselves, thus eliminating a large item of expense. By having two tanks and a little more piping, both hard and soft water can be put on tap. The soft water tank may be filled direct from the roof, to save pumping.

The pneumatic pressure tank placed in the cellar is an improvement on the elevated tank. Water is pumped into a metal tank against air pressure which forces the water to all parts of the house. This system, while more expensive than the other, has several things to commend it.

At its best the outdoor closet is unsanitary and is responsible for more sickness than is generally believed. Towns and cities have banned it at great expense, but it still exists on the majority of farms, although the indoor lavatory is as possible in the country as in the city, and at no greater expense.

The pneumatic pressure tank, or tank in the attic, will furnish water for flushing the commode, and a septic tank which can be built by any handy man for a few dollars will dispose of all sewage. Why then subject yourself and family to unnecessary hardship this coming winter and for years to come, when a small

Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending September 27. Receipts and Market Tops.

Dominion Department of Agriculture, Live Stock Branch, Markets Intelligence Division

	CATTLE						CALVES						SHEEP					
	Receipts		Top Price Good Steers (1,000-1,200)				Receipts		Top Price Good Calves				Receipts		Top Price Good Lambs			
	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending
Toronto (Union Stock Yards)	7,440	7,333	8,706	\$11.00	\$8.25	\$10.75	640	862	969	\$15.50	\$12.00	\$15.00	8,617	5,716	13,546	\$15.75	\$10.50	\$16.50
Montreal (Pt. St. Charles)	2,130	1,463	1,817	10.40	7.75	10.25	774	540	748	14.00	10.00	15.00	5,967	2,726	5,549	15.00	10.50	15.25
Montreal (East End)	2,021	2,081	1,936	10.40	7.75	10.00	588	1,012	500	14.00	10.00	14.00	4,518	2,443	3,470	15.00	10.50	15.25
Winnipeg	7,918	6,664	8,753	11.00	7.00	10.60	268	286	361	11.00	8.00	10.00	1,811	586	1,620	15.50	10.00	15.50

Market Comments.
Toronto (Union Stock Yards.)
 Live stock receipts for the week dropped several thousand head below the previous week's totals in both cattle and sheep, but notwithstanding this fact there was a liberal and normal supply on sale for this season of the year. The shipments of cattle consigned to abattoirs were confined to about five hundred head, the remainder being sold on the open market. The quality of the stock offered was on the whole inferior, the exceptions being a few loads of good weighty killers on the Monday market, with a few more loads sprinkled through the receipts for the balance of the week. With thirty-eight hundred cattle on sale on Monday, trading might be classed as steady, with commission houses asking higher prices, and slightly better prices did prevail early in the morning for good quality cattle, but these were paid in a few instances only, and in common butcher cattle trading was slow. On Tuesday, the market was slow and draggy but a fairly active demand prevailed on Wednesday and Thursday. Cattle moving out on the later dates at steady prices for medium grades and about 10 cents higher for choice quality butcher cattle. One load of steers about fourteen hundred pounds in weight, from Pt. Elgin, Ont., went to Hamilton, Ontario on Monday at \$13 per hundred. Other choice cattle in this class sold at \$12 to \$12.25 with good steers selling from \$11.25 to \$12, while on Wednesday a heavy bullock again topped the market at \$13, and two loads of equal weight from Manitoulin Island realized \$11.40. Three car loads of heavy steers went to New York. Heavy butcher steers sold up to \$11 per hundred with the bulk selling from \$10 to \$10.75. While heavy weight butcher steers sold as high as \$10.25, the bulk moved at \$9 to \$9.75, and common eastern lots at \$7 to \$8. Cows were steady with \$8.75 being paid for choice ones, the bulk moving at \$7 to \$7.75. The bulls offered were an inferior lot of dairy breeding and sold at \$5.75 to \$7.25. Stockers and feeders were selling freely at steady prices, limited numbers going to the States, while heavy shipments continue to be made to Ontario farmers. Feeders were selling from \$8.25 to \$9.25, according to weight and quality and breedy stockers from seven hundred to eight hundred pounds sold from \$7.75 to \$8.25, and common stuff at \$6.50 to \$7.50 per hundred. Choice veal was steady with common rough calves slow sellers. The effect of Jewish holidays was noticeable on the market for calves; \$15.50 was the top price for choice veal. Lambs sold on Monday at \$15 to \$15.35 and on Tuesday at \$15 retaining this level on Wednesday, but losing a quarter on Thursday, when \$15 to \$15.25 was the ruling range. Common lambs sold from \$10 to \$13. American buyers are still operating and about three thousand head were bought for American abattoirs throughout the week. Hogs advanced 25 cents on Monday to \$18.25 for selects, fed and watered, and made similar advances on Tuesday and Wednesday, the market closing firm and active at this new level on Thursday with commission houses endeavoring to realize \$19. However the bulk were weighed up at \$18.75. Of the disposition from the Yards for the week ending September 20th, Canadian packing houses bought 287 calves,

CLASSIFICATION	No.	TORONTO (Union Stock Yards)		MONTREAL (Pt. St. Charles)	
		Avg. Price	Price Range	Avg. Price	Price Range
STEERS					
heavy finished	155	\$11.68	\$11.00-\$12.00	\$10.50	\$10.50-\$10.50
STEERS					
good	554	10.27	9.50-10.75	10.15	10.00-10.40
1,000-1,200 common	77	8.86	8.25-9.50	9.50	9.25-9.75
STEERS					
good	1,142	9.50	9.00-9.75	9.70	9.50-9.80
700-1,000 common	457	8.25	7.50-8.50	8.00	7.25-8.50
HEIFERS					
good	231	9.57	9.25-10.00	9.50	9.50-9.50
fair	451	8.59	7.75-9.00	8.50	8.25-8.75
common	190	7.34	6.50-8.00	7.50	7.50-7.75
Cows					
good	493	7.09	7.00-8.00	8.15	8.00-8.25
common	1,092	6.34	5.75-6.75	7.07	6.50-7.50
BULLS					
good	41	7.46	6.75-8.00	8.75	6.75-9.00
common	349	6.25	5.75-6.75	6.44	6.00-6.75
CANNERS & CUTTERS	155	5.25	5.00-5.50	5.69	5.00-6.25
OXEN	10			8.25	8.00-8.50
CALVES					
veal	495	14.00	13.00-15.00	11.60	8.00-14.00
grass	145	7.27	6.50-8.00	7.02	6.50-7.50
STOCKERS					
good	640	8.00	7.50-8.25		
450-800 fair	740	7.25	6.75-7.75		
FEEDERS					
good	306	9.00	8.75-9.25		
800-1,000 fair	357	8.50	8.25-8.75		
Hogs					
(fed and watered)					
selects	4,555	18.47	18.00-18.75	18.22	18.00-18.40
heavies				6	18.00
lights	297	18.16	17.00-18.75	193	17.85
sows	113	16.53	16.00-16.75	96	15.26
stags	1	14.75			
LAMBS					
good	7,538	15.25	15.00-15.75	2,131	14.88
common	604	12.58	12.00-14.00	3,476	14.48
SHEEP					
heavy	32	8.58	7.50-9.50	56	10.38
light	322	10.09	9.00-11.00	23	11.00
common	121	6.94	6.00-8.00	281	9.75

216 bulls, 154 heavy steers, 4,566 butcher cattle, 6,569 hogs, and 11,037 sheep and lambs. Local butchers purchased 139 calves, 543 butcher cattle, 229 hogs, and 606 sheep and lambs. Canadian shipments consisted of 68 calves, 55 milch cows, 54 butcher cattle, 1,504 stockers, 664 feeders, 7 hogs and 667 sheep and lambs. Shipments to United States' points were made up of 191 calves, 104 heavy steers, 370 butcher cattle, 501 stockers, 259 feeders and 4,157 lambs. The total receipts of live stock from January 1st to September 20th, inclusive, were: 185,834 cattle, 37,201 calves, 73,563 sheep, and 314,053 hogs; compared to 186,908 cattle, 35,287 calves, 73,563 sheep and 330,127 hogs, received during the corresponding period of 1916. **Montreal.** Cattle receipts for the week totaled forty one hundred head. While there was nothing choice on the market the supply of fairly good butcher stock was more liberal than for the past week or two. Prices for the better grades were about 25 cents per hundred below the previous week's quotations. Not many sales were made above \$10 per hundred, although sales were made up to \$10.50. Light butcher steers and heifers sold mostly from \$7.50 to \$8.50, with a few that approached the canning class, as low as \$6.75. Common and bologna bulls constituted a large part of the receipts.

Prices for these held fairly steady, bologna bulls selling mostly from \$6 to \$6.25, and the common butcher bulls generally from \$6.75 to \$7.50. About two hundred and twenty bulls were bought for shipments to Boston, Massachusetts. Calves of all grades held about steady under a good demand from the American buyers who took seven hundred and fifty head. Receipts of sheep and lambs totaled nearly ten thousand five hundred head. Prices for lambs declined slightly from the previous week's quotations, with the bulk of the good ones selling from \$14.75 to \$15 per hundred and the common grades generally from \$14 to \$14.50. Sheep sold at about last week's quotations. Toward the close of the week selling began to drag slightly. American buyers shipped fifty seven hundred head across the line. Hogs sold mostly from \$18.25 for selects, off cars. A few lots made \$18.75 but the general prices were \$18.50 off cars, for longrun selects and \$18.25 for those from near-by points. **PT. ST. CHARLES.**—Of the disposition from the Yards for the week ending September 20th, inclusive, Canadian packing houses and local butchers bought 239 calves, 292 canners and cutters, 683 bulls, 736 butcher cattle, 1,774 hogs, 41 sheep and 908 lambs. Twenty milch cows were shipped back to the country as also were 207 lambs. Shipments to

United States' points were made up of 509 calves, 72 bulls, 176 sheep, and 4,217 lambs. The total receipts of live stock from January 1st to September 20th, inclusive, were: 31,412 cattle, 46,272 calves, 33,868 sheep and 55,318 hogs; compared to 32,347 cattle, 36,527 calves, 35,139 sheep and 66,194 hogs, received during the corresponding period of 1916. **EAST END.**—Of the disposition from the Yards for the week ending September 20th, Canadian packing houses and local butchers bought 1,630 butcher cattle and 1,095 hogs. Canadian shipments consisted of 69 calves, 171 butcher cattle, 11 hogs, and 179 sheep and lambs. Shipments to United States' points were made up of 753 calves, 135 butcher cattle, and 3,535 sheep and lambs. The total receipts of live stock from January 1st to September 20th, inclusive, were: 31,372 cattle, 35,683 calves, 21,788 sheep and 32,126 hogs; compared to 30,389 cattle, 35,930 calves, 28,106 sheep and 42,615 hogs, received during the corresponding period of 1916. **Winnipeg.** Receipts of butcher cattle during the week, were one thousand head fewer than those of the previous week. Eight thousand were sold on the market and two hundred were billed through. Trading was steady to strong on all classes on Friday and this condition was maintained on Monday under heavy receipts. On

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Tuesday and Wednesday, however, receipts were light and the market slow but on Thursday the market closed in a brisk and strong condition. Choice heavy steers and choice feeders weighing around eleven hundred pounds, were the best sellers, although all common classes of cattle met with a good demand both on local and eastern account. One steer fourteen hundred pounds in weight sold at \$12.50 per hundred, and six head averaging twelve hundred and fifty pounds realized \$11, while the bulk of the heavy butcher stock sold from \$9.50 to \$10.75. Steers one thousand to twelve hundred pounds in weight, were in demand and sold at strong prices, twenty head averaging eleven hundred and ninety pounds bringing \$11; the bulk of the choice brought from \$8.75 to \$10 and those of medium quality from \$7.60 to \$8.50. Light butcher steers of from seven hundred to one thousand pounds continue to be in good demand both by local packers and eastern buyers. The best sell from \$8 to \$10 per hundred, and medium from \$7 to \$7.75. Butcher heifers were steady, and those of choice quality brought from \$7.80 to \$9, medium from \$6.80 to \$7.50, and common classes from \$5.80 to \$6.50.

Sheep and lambs held steady with a fair run during the week. Best lambs sold from \$14.50 to \$15.50 per hundred and common lambs, from \$8.50 to \$9.25. The bulk of the sheep sold from \$11 to \$12.20, although a few of extra quality topped the market at \$12.50. Common lambs and bucks sold from \$7 to \$8.25.

The run of hogs continued light and the market was erratic. On Monday selects sold at \$17.25, on a fed and watered basis and advanced by 25-cents on Tuesday. The market opened 25 cents lower on Thursday, but made gains during the day and closed at \$17.50. Heavy hogs sold from \$15 to \$16; lights \$15.50 to \$17; sows \$14 to \$15, and stags \$9.50 to \$11.

Of the disposition of live stock from the Yards for the week ending September 20th, Canadian packing houses bought 131 calves 4,167 butcher cattle, 1,898 hogs, and 985 sheep and lambs. Local butchers purchased 156 calves, 581 butcher cattle, 291 hogs and 408 sheep and lambs. Canadian shipments consisted of 2 calves, 115 butcher cattle, 959 stockers, and 407 feeders. Shipments to United States' points were made up of 1,577 butcher cattle, 968 stockers, 567 feeders and 276 sheep and lambs.

The total receipts of live stock from January 1st to September 20th, inclusive, were: 120,058 cattle, 5,998 calves, 7,638 sheep and 195,684 hogs; compared to 69,385 cattle, 6,963 calves, 10,966 sheep and 245,659 hogs, received during the corresponding period of 1916.

Buffalo.

Cattle.—Excessive cattle receipts at all of the principal American markets last week, resulted in values declining at all points. Buffalo showing a take-off on shipping steers of from a quarter to half a dollar. Jewish holidays were being observed and this had its effect on the meat trade. There were in the approximately 300-car supply or around 7,500 head for the opening day last week, around a hundred cars of Canadians. Canadian shipping steers topped the market ranging from \$13 to \$13.75, top price being paid for the heavy weight ones. In the handy butchering steer line receipts were limited, but the supply of fat heifers

was large and these took the place of handy steers mainly with the local killers, this end of the trade showing a full quarter decline, some cases more. Offerings for the week totaled 7,275 head, as against 6,750 for the preceding week and 5,850 for the corresponding week last year. Quotations:

Shipping Steers.—Choice to prime natives, \$14 to \$15; fair to good, \$13 to \$13.50; plain, \$11.50 to \$12.25; very coarse and common, \$10 to \$10.75; best grass Canadians, \$12.25 to \$13; fair to good, \$11 to \$12; common and plain, \$10 to \$10.75.

Butchering Steers.—Choice heavy, \$11.75 to \$12.50; fair to good, \$11 to \$11.50; best handy, \$11.25 to \$12; fair to good, \$10 to \$10.75; light and common, \$8.50 to \$9.50; yearlings, choice to prime, \$13 to \$13.50; fair to good, \$12.25 to \$12.75.

Cows and Heifers.—Best heavy heifers, \$10 to \$11; best butchering heifers, \$9 to \$9.50; fair butchering heifers, \$8 to \$8.75; light and common, \$6.75 to \$7.75; very fancy fat cows, \$9.50 to \$9.75; best heavy fat cows, \$8.50 to \$9.25; good butchering cows, \$7.50 to \$8.25; medium to fair, \$6.75 to \$7.25; cutters, \$6 to \$6.50; canners, \$4.50 to \$5.50.

Bulls.—Best heavy, \$9 to \$9.50; good butchering, 7.50 to \$8.25.

Stockers and Feeders.—Best feeders, \$8 to \$8.50; common to fair, \$7 to \$7.50; best stockers, \$7.50 to \$8; common to good, \$6.50 to \$7.25.

Milchers and Springers.—Good to best, in small lots, \$90 to \$130; in car loads, \$85 to \$100.

Hogs.—Prices showed a steady advance last week. Monday, which was the low day, top was \$19.40, however, good hogs were scarce and the general run was from \$19 to \$19.25, with pigs selling mostly at \$18. The next four days prices were higher, and before the week was out, or on Friday, best weight grades sold up to \$20 and on this day nothing, outside of lights and pigs, fell below \$19.50, latter grades taking a range of from \$18.25 to \$19. Rought brought from \$18.25 to \$18.50, with some fancy ones as high as \$19, and stags downward from \$17.50. Monday's range on good Canadian hogs was from \$18.85 to \$19, and Thursday a load of good Canadians reached \$19.25. Receipts last week were 14,600 head, as compared with 14,408 head for the week before and 27,400 head for the same week a year ago.

Sheep and Lambs.—Market on lambs occupied an unfavorable position last week. The week started out with tops selling generally at \$17.25; however, several decks had to be carried over unsold, and the next three days the market on tops was slow at \$17. Friday prices were a little stronger than Thursday or about steady with the opening day of the week. Cull lambs sold anywhere from \$10 to \$15, and some ewe and wether throwouts were taken by feeder buyers as high as \$15.50 and \$16.75. Canadian lambs undersold the best natives by from 75 cents to \$1.00 per cwt., and coarse weighty Canadian buck lambs were not worth any more than the good native culls. Sheep were active and steady all week. Wethers sold up to \$12 and ewes from \$11.50 down. Receipts last week were 10,250 head, as against 14,629 head for the week previous, and 17,900 head for the same week a year ago.

Calves.—Approximately 2,125 head were marketed last week, being against 2,255 head for the week previous, and 2,250 head for the same week a year ago. Market was slow all week. Monday was the high day, when bulk sold at \$16.50. The next three days tops were hard to sell above \$16, and Friday the market for choice lots was \$16 and \$16.25. Good light culls were worth up to \$15, some weighty calves on the vealy order sold up to \$14, weighty rough calves were hard to sell at a range of from \$8 to \$10, and grassers showed a spread of from \$6 to \$8.

Toronto Produce.

Receipts of live stock at the Union Stock Yards, Monday, Oct. 1, consisted of 259 cars, 4,821 cattle, 216 calves, 2,417 hogs, 3,435 sheep and lambs. Good cattle of all grades strong; common cattle steady. Lambs 15 to 25 cents higher. Sheep, strong. Calves, steady. Hogs \$19, fed and watered.

Breadstuffs.

Wheat.—Ontario No. 2, winter, per car lot, \$2.17 to \$2.20. Manitoba (in store, Fort William)—No. 1 northern, \$2.23; No. 2 northern, \$2.20; No. 3 northern, \$2.17; No. 4 wheat, \$2.09½, nominal.

Oats.—Ontario, according to freights outside, No. 2 white, 62c., nominal; No. 3 white, 59c., nominal; Manitoba oats (in store, Fort William)—No. 2 C. W., 68c., nominal.

Barley.—Malting, new crop, \$1.18 to \$1.20.

Peas.—Nominal.

Corn.—No. 3 yellow, nominal.

Flour.—Manitoba first patents in jute bags, \$11.50; second patents, in jute bags, \$11.00; strong bakers', \$10.60; Ontario winter wheat flour, according to sample in bags, \$10.20.

Hay and Millfeeds.

Hay.—Track, Toronto, No. 1, new, per ton, \$11 to \$11.50; mixed, per ton, \$8 to \$9.50.

Straw.—Car lots, per ton, \$7 to \$7.50.

Bran.—Per ton, \$35.

Shorts.—Per ton, \$42; middlings, per ton, \$45 to \$46. Good feed flour, per bag, \$3.25.

Hides and Wool.

City Hides.—City butcher hides, green, flats, 20c.; calf skins, green, flat, 25c.; veal kip, 20c.; horse hides, city take-off, \$5.50; city lamb skins, shearings and pelts, \$1.50 to \$2.50; sheep, \$2.50 to \$4.50.

Country Markets.—Beef hides, flat, cured, 20c. to 21c.; deacons or bob calf, \$1.75 to \$2.50 each; horse hides, country take-off, No. 1, \$6 to \$7; No. 2, \$5 to \$6; No. 1 sheep skins, \$2 to \$2.50. Horse hair, farmers' stock, \$25.

Tallow.—City rendered, solids, in barrels, 13c. to 14c.; country solid, in barrels, No. 1, 12c. to 16c.; cakes, No. 1, 14c. to 16c.

Wool.—Unwashed fleece wool, as to quality, fine, 70c.; coarse, 65c.

Country Produce.

Butter.—Although butter kept stationary in price on the wholesales during the past week there was a firming tendency, and we may look for an advance this week. Creamery fresh-made pound squares, 44c. to 45c. per lb.; creamery solids at 43c. to 44c. per lb.; separator dairy at 42c. per lb.; and dairy at 37c. to 38c. per lb.

Eggs.—Fresh gathered eggs also remained unchanged in price, selling as follows, wholesale: No. 1s, 47c. per doz.; selects, 50c. per doz.; in cartons, 54c. per doz.

Cheese.—New, large, 24c.; twins, 24½c.; old, 30c. to 31c.; twins, 31c.

Beans.—India, hand-picked, \$6.50 per bushel; prime, \$8.75.

Poultry.—Spring chickens, 22c. per lb.; ducklings, 17c. per lb.; old ducks, 10c. per lb.; roosters, 16c. per lb.; fowl, 4 lbs. and under, 18c. per lb.; fowl, over 4 lbs., 22c. per lb. Quotations all live weight.

Honey.—Honey is quite scarce, and advanced slightly in price wholesale, selling as follows: strained, 5-lb. pails, 18½c. per lb.; 10-lb. pails, 18c. per lb.; 60-lb. pails, 17½c. per lb.; the sections of comb honey selling at \$3 to \$3.25 per dozen.

Wholesale Fruits and Vegetables.

Peaches were the feature on the wholesale fruit market during the past week; arriving in very large quantities and gradually improving in quality; the demand, however, held pretty well, so there was not any great slump in prices; 6-qt. flats selling at 25c. to 45c.; 6-qt. lenos at 30c. to 70c.; 11-qt. flats at 30c. to 75c., and 11-qt. lenos at 40c. to \$1.25.

Apples.—The demand for apples decreased, and the bulk of those shipped in were low grade, selling at 25c. to 60c. per 11-qt. basket and \$4.50 to \$6 per bbl.

Plums.—Prices kept fairly firm at 35c. to 45c. per 6-qt. flats; 50c. to 65c. per 6-qt. lenos and 65c. to \$1.25 per 11-qt. flats.

Pears.—Pears remained practically unchanged in price, selling at 30c. to 50c. per 6-qt. basket and 40c. to 75c. per 11-qt. basket; an odd one of extra choice quality bringing \$1.

Tomatoes.—After being scarce and high priced, tomatoes came in freely and declined materially, selling at 25c. to 40c. per 11-qt. basket, and 15c. to 25c. per 6 qts.

Beans.—Beans also declined, principally because the bulk were very poor quality, selling at 40c. to 60c. per 11-qt. basket.

Potatoes declined, selling at \$1.25 to \$1.35 per bag.

Montreal Produce.

Dressed Hogs.—Live hogs sold locally at 17½c. to 18½c. per lb. for selects, weighed off cars, while dressed brought as high as 25c. to 25½c. per lb., this being for abattoir-killed.

Potatoes.—The report is heard that the Food Controller may fix the price of potatoes at \$1.25 per bag. Officially, bags contain 90 lbs., though 80 lbs. has been the accepted bag in this market. Meantime, \$1.65 per bag of 80 lbs. is being quoted ex-store, while car lots are \$1.55 per 90 lbs., ex-track.

Honey and Maple Syrup.—The market for honey was steady, and supplies of new stock are light. White clover comb was quoted at 15c.; brown 14c.; white extracted 14c., and buckwheat 11c., the range being to about ½c. above the figures mentioned. Maple syrup was firm and in fair demand at prices ranging from \$1.25 to \$1.80 per gallon of 13 lbs., according to quality. Sugar was about 15c. per lb.

Eggs.—No change in prices of eggs took place last week. The market continued very firm, however, and it is understood Great Britain is looking for further supplies. Strictly new-laid eggs were 53c. to 54c. per doz.; selects 47c. to 48c.; No. 1 candled, 43c. to 44c.; and No. 2 candled 40c. to 41c.

Butter.—The market for creamery was very firm last week, and advances took place both here and throughout the country. Finest creamery was quoted at 44½c. to 45c. per lb., and fine at 43½c. to 44c. Finest dairy was 38c. to 38½c., and fine to lower grades at 37c. to 36c.

Cheese.—Prices paid by the commission for cheese were as follows: No. 1 cheese, 21½c.; No. 2 cheese, 21¼c.; No. 3 cheese 20¾c., per lb.

Grain.—A slightly firmer tone developed in the market for oats during last week. No. 2 Canadian Western were quoted at 77½c. per bushel; No. 3, 76½c.; extra No. 1 feed, 76c.; and No. 1 feed 74½c. Ontario and Quebec No. 2 white oats sold at 71c., while No. 3 white are 70c. per bushel, ex-store. Car lots of Manitoba feed and rejected barley sold at \$1.29 per bushel, ex-store.

Flour.—Little change took place, though it has been stated that there is some price-cutting. Manitoba first patents were \$11.60; seconds \$11.10, and strong bakers' \$10.90 per barrel, in bags. Ontario 90 per cent. patents were \$5.50 to \$5.75 per bag, and \$11.30 to \$11.80 per barrel, in wood.

Mill Feed.—Bran continued to change hands at \$34 to \$35 per ton, while shorts sold at \$40 to \$41; middlings at \$48 to \$50, and pure grain mouille at \$58 to \$60. Mixed mouille was \$55 to \$56 per ton, in bags.

Hay.—Demand for export to the United States continued and prices were steady at \$11.50 to \$11 per ton, for No. 2 baled hay; \$9.50 to \$10 for No. 3, ex-track.

Cheese Markets.

Mont Joli, 20 15-16c.; Montreal, finest westerns, 21½c.; finest easterns, 21¼c.; Belleville, 21¼c.; London, 21¼c.; St. Hyacinthe, 21¼c.

Jersey and Sheep Sale at Brampton

About two miles from Brampton station, at the farm of James R. Fallis, on the 17th of October, dairymen will have a splendid opportunity to purchase good Jerseys, while anyone wanting sheep will find 300 to select from. One-third of these are registered Ox-fords, 80 of which are ewes and ewe lambs, the remainder being largely ram lambs. One hundred of this flock are ewes of an Oxford and Shropshire cross, the remaining hundred are grade ewes.

Cowieson's Dispersion Sale.

J. B. Cowieson will sell at his farm at Queensville, on Monday, October 8, his entire stock without reserve. This includes Standardbred horses, Jersey cattle, Shropshire sheep, Yorkshire and Tamworth swine. The Jerseys are a well-bred lot and have been headed by Kirkfield's Choice, a son of Beulah's Raleigh and Meadowgrass 2nd, that well known matron of the breed which has won five firsts at Toronto Exhibition and also has four grand championship ribbons. Twenty Shropshire breeding ewes, five ram lambs and two two-shear lambs will be sold.



A Song of Thankfulness.

I thank thee, Lord, for the blue of Thy sky;

For the green of Thy woods and fields;
For the river that ripples and sparkles by,
And the harvest the brown earth yields;
For the birds that sing and the flowers
that bloom,

And the breath of the cooling breeze—
Thou hast made them all so beautiful—
I thank Thee, Lord, for these!

I thank Thee, Lord, for a brain to think,
And a will to dare and do;
For a heart which may give my fellow-
man

A love that is strong and true;
For a spirit that is but the breath of God,
And is new when the world is old—
I yield them all to Thyself, dear Lord.
They are Thine to have and hold.

Only use them, Lord, in Thy shaping
hand

For an end that Thine eye can see,
As day by day thou art fashioning
Thy child to be more like Thee.
Let Thine image shine from my faithful
heart

As a light over life's rough way,
That others may find it an easier path,
And be led to a perfect day.
—E. A. Hawkins, in Zion's Herald.

Through the Eyes of a Canadian Woman in England.

August 15th.
August was ushered in by rain which fell day after day ceaselessly and heavily, such a continuance of which has not been known in England for many years. During this dismal period I was ill, and each morning hoped for a ray of sunshine to cheer my drooping spirits, but none came. The trees which darkened the basement window in my room were dripping with moisture, and I grew very weary of the sound of falling rain. At last one fine day came, and a great day it proved to be in this old-world village, for the King and Queen, accompanied by the Duke of Connaught, paid us a visit! As I lay in bed, rebellious in spirit, I listened keenly to the sounds of rejoicing in the outer world. Band after band passed by, and I missed not a note of the cheering which heralded the approach of their Majesties. The King came, of course, to review the troops, who had been prepared for his coming, and he complimented this great Canadian division most highly on its appearance and efficiency. A platform had been erected hurriedly in the centre of the village, and there the royal party were conducted upon alighting from their automobiles. In the haste of preparation—or perhaps because they did not know she was coming, the placing of a seat for the queen had been overlooked. Her majesty looked around for one, and an old woman in a cottage nearby, with great presence of mind, ran forward carrying a kitchen chair, upon which she placed a well-worn cushion. Her Majesty smiled her thanks and immediately sat down upon it. The sweetness of Queen Mary's smile would be sufficient reward for any act of courtesy. Needless to say, that greatly favored piece of furniture now occupies a cherished place in its humble abode! The King, they tell me, looked bronzed and soldier-like in his khaki. Queen Mary's stately figure was enveloped in the usual perfectly fitting "tailor-made" of champagne color, with a hat to match, trimmed with soft pink roses, and her beautiful hair most becomingly coiffed. The Duke won all hearts as he always does by his kind and charming personality. Our King and Queen are greatly endearing themselves to their people in this time of England's stress and sorrow, by their sympathy to

all in trouble, and their deep interest in the many forms of war-work in which their subjects are engaged. Not long ago when the King visited the troops in France, the Queen accompanied him everywhere, in spite of the perils with which such a journey is so fraught at the present time.

NOW the weather is fine but cool—so cool that it recalls October days in Canada. A smell of the salt sea to which I have always been accustomed seems necessary to complete my recovery. How I longed for the *dolce far niente* of past summers in the dear sea-side bungalow. But that was an impossibility, so my friend and I planned a week-end at the Isle of Wight. After a short train journey we arrived at old Portsmouth. From there we motored two miles further to the beautiful south sea beach, and at last were once more by the sea, and mingling with happy crowds of people. We sat down and watched the passing show, to me one of the most interesting features of a sea-side resort. Now the crowds are all women and children except for the sailors (and soldiers enjoying a short holiday) or wounded men from nearby hospitals. Except for the continual passing of destroyers and mine-sweepers we could easily have forgotten for the moment that England was at war. The surroundings are picturesque and beautiful. The promenade along the esplanade is three miles in length, including the pretty "Lady's Walk," and a wonderful view meets the eye as one looks out on the silvery Solent. A little further away lies the Isle of Wight, resembling, with its verdant shores, an emerald in a silver setting. Here too is Spithead, where England's fleets have been anchored for centuries. From this beach Nelson embarked before Trafalgar, and on a

huge boulder of stone rests the great anchor from his famous ship marking the spot. On one side of the pedestal are carved the words, "England expects every man to do his duty," and on the other the motto, "Ready, aye ready." We saw, too, the "Victory" lying in the harbor, where she is still used as a training ship. She was built in 1765 and became flagship at Portsmouth in 1825, twenty years after Lord Nelson sailed on his last voyage. In 1903 she was seriously damaged by the old iron-clad "Neptune," but was lovingly repaired and restored, and the cock-pit is now, as nearly as possible, in the same condition as when it was the death-chamber of the great naval hero. (I am led to wonder when and why the large amount of metal was extracted from her which fashioned the "Nelson Memorials" distributed to schools in Canada a few years ago!)

Next morning we sailed across to the Isle of Wight, enjoying every moment of it, for *mal-de-mer* is unknown there, and although there was a gay breeze, the air was soft and balmy. On arriving at our destination, Cowes, all the passengers were questioned as to their nationality before leaving the boat. When we proudly said "Canadians," the inspector looked kindly upon us and said, *en passant*, "I wish I were; I've got boys over there." Cowes, famous for its great regattas, is surely the queen of summer places. The long, pebbly beach, the magnificent outlook, and its quaint ivy-covered homes along the water-front all combine to make it so, and we spent a happy day there. The sail back in the evening, in spite of our regrets at the shortness of our visit, was charming. The big comfortable steamer, "The Solent Queen," hugged the shore most of the way, presenting one exquisite bit of scenery after another. We passed Carisbrook Castle with its many grey

towers, now the residence of Princess Beatrice, and afterwards Osborne, the residence for a part of every year of the late Queen Victoria. This property passed into the hands of King Edward at her death, and he graciously opened most of it to the public, notably the Durbar Room which contains the Jubilee presents, and the dining-room and corridors containing historic pictures, costly furniture and beautiful statuary. Part of it is now used as a hospital for wounded officers of the navy. I hope I may have an opportunity some future time to visit this deeply interesting place, and also the home of Charles Dickens at Portsmouth, for which I had only time for a passing glance. I am told it contains a fine collection of first editions, paintings and photographs.

One never seems to have time to see all the interesting places in these old English towns. Cowes was in peace times the centre of the English yachting world, and its Royal Yacht Club is one of the most exclusive organizations in the kingdom. Our eyes had become so accustomed to khaki that this visit to the coast was a decided change, for there the eye rested always on the blue and gold of the king's navy. There were absolutely no young men in "civies." Even the clerks at the hotels were women, and a husky girl carried my suit-case up the stairs on my arrival and down again when I left. The head waiter was actually a man, but a very decrepit one who had apparently spent his life in that capacity; I brought back with me a fine bunch of dulse—perhaps my inland readers have never felt the joy of this, what shall I call it?—Sea-food. The dictionary defines it as "a species of sea-weed." It resembles kelp, only in a rich, dark red color instead of brown—in fact it bears the same relation in my mind that a mushroom does to a toad-stool, or an oyster to a salsify plant. However, it is a great tonic and appetizer, and I delighted in gathering it as it was washed up in the surf at Cowes. Upon partaking of it, every fibre of my being immediately clamored for food, (a craving I had not felt for some days), and my steps turned hastily toward the hotel and lunch. If I were a doctor my favorite prescription for loss of appetite would be a visit to the seaside where this salty delicacy could be found. Rations prevailed in all the hotels we visited—so one must not produce *too* good an appetite. Bread and sugar are still guarded with a jealous eye. A plum tart was set before us—"it is never a 'pie'!"—guiltless of sugar, and I asked if I might have some. A tiny dish of the dark brown variety was, after some hesitation on the part of the waiter, set before me. I felt that his eye was upon me so I helped myself gingerly. Later I turned to take more, and behold, it had silently been removed. Stung!

THE passing through of the first American army was the event of this week in London. The notice was short and military reasons prevented any celebration on a large scale, but the new army received a hearty welcome, and all London seemed to turn out to give them the glad hand. As they arrived at Waterloo station the first cheer the visitors received, strange to say came from a body of British soldiers waiting to depart for France. There were between four and five thousand Americans, representing four regiments, and they look well-trained, seasoned troops, and although few of them had been in England before they were quite at home under their new surroundings. Already they are known as the "Sammies." Their uniform is very similar to ours, except that the khaki is a lighter shade and they wear hats as the Australians do. One reporter sums up the march as "a bird's-eye glimpse of America's might." The bands of the Guards' Brigade, probably the finest in



Gen. Sir Douglas Haig, Gen. Joffre, and Premier Lloyd George.

Underwood & Underwood.

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the world, played them along, and the King took the salute in front of Buckingham Palace. The Prime Minister and members of the Cabinet saw them from the balcony of the War Office. A meeting of its cabinet, which was in progress at the time, was adjourned in order to allow the Premier and his colleagues to pay this compliment to the troops of the great Republic, and they went over to the War Office in a body. When the soldiers left Wellington Barracks "The Boston Tea-party" was the march played. All past differences have been forgotten, and this Christian nation heartily gives of its best for the common good and the putting down of oppression and Prussianism.

THERE are difficulties about getting anywhere these days. The complete bus routes which connected all English towns and villages have become greatly demoralized since war began. The best of the cars were, of course, sent to France, only a very few necessary ones being left here. To be sure, there is a bus from military camps to nearby towns, but it cannot be depended upon. After one has waited patiently on the roadside to catch on, it usually sails majestically by, so heavily laden with soldiers that they seem to be clinging to it in all directions. Perhaps you decide to walk rather than be balked, but you are never sure of getting back on it either, for likely in the meantime the old bus has broken down. The excuse for such poor accommodation is always the "shortness of petrol." It is claimed that joy-riding is a thing of the past, but I fear England does not differ from other places in that if you have plenty of money and "pull" you are master of the situation, for still occasional happy family parties, luxuriating in commodious cars, are to be seen upon the roads, who I am sure are not travelling "on military service." Of course petrol is very difficult to obtain for the general public. The following advertisement in a recent paper speaks for itself: "Gentleman resident in London is open to exchange fine Scotch whiskey or port for petrol." In July the Automobile Association held its annual meeting at the Savoy. In the course of his speech, Mr. Joynton Hicks, who presided, said that they had enrolled four thousand new members during this third year of the war, although there was practically no pleasure motoring. There was to-day, he said, an association of bus motorists, war-workers, naval and military workers, all doing something to help the national cause. With regard to supplies motorists had been reduced from sixteen gallons to nothing a month, unless they were doing war-work. He assured them that there was ample petrol in the world, and there would be no shortage when the war was over, but people must wait until tankage is available once more.

O, that happy time "when the war is over." It is the first petition in our prayers, and the commonest wish on our lips to-day. Most Canadian women here have taken up bicycling again—the English people never dropped it—and one sees bevy of people everywhere on wheels; I have often counted thirty seemingly in one group. They are found most useful for delivering, and large parcels and small are tied on back and front and all over; sometimes presenting a most grotesque appearance, and causing you to wonder how such a frail-looking vehicle can bear such a heavy burden. Thousands of people go for week-ends—and on longer vacations too—on their bicycles, for we have learned in these times of difficult and expensive transportation to "travel light." But the drawbacks of ordinary travel do not apply to the Red Cross. One evening I was in Godalming, a town two miles from here, and witnessed the arrival of a Red Cross train bearing to the hospitals wounded men who had been fighting that morning in Flanders. Though wearing many bandages and looking pale from loss of blood, they were on the whole a cheerful, smiling crowd. Sometimes they describe to us the delights of a soft bed and cool, white sheets in contrast to the deep mud in the trenches. On June the 7th, the day the Messines Ridge was carried, ambulance trains were entering Charing Cross Station, London, at 2.15 in the afternoon. The action began at daybreak, and people in London returning from luncheon saw the casualties from the battle. On Easter Monday Vimy Ridge was attacked at 5.30 in the morning. Within an hour the wounded were coming down. Shortly after noon

the battle was over and by four o'clock the field was clear. In one case the feat was performed by the Royal Army Medical Corps, and in the other (Vimy Ridge) by the Canadian Army Medical Corps. So you see how expeditiously everything is done for our wounded men.

THE artillery lines in the camp this afternoon present a busy appearance; the limbers, fully loaded with all the paraphernalia of the artillery men departing for active service. Forage, supply and ammunition wagons with their six-horse or mule teams, drawn up in column, betoken a move within the next few hours. No information as to the time of departure is allowed to leak out by the authorities in advance, but I expect through the long hours of the night to hear a continuous rumble of guns and transports passing, and to learn in the morning that these brave Canadian soldiers are well on their way across the Channel to the British lines in Flanders. Before this is read, even by the censor, the chances are that they will have heard the word "action."

There will be lonely hearts among the "artillery" wives in this little village tomorrow, and anxious hours until the first message arrives from the dear ones. It is well there is such a little colony of us here, for the presence and sympathy of friends are a great help at a time like this. There are long days of praying and hoping ahead, and we are thankful, too, that there is plenty work to occupy the minds and hands.

SIBYL.

Hope's Quiet Hour

Giving Thanks Always.

Be filled with the Spirit. . . singing and making melody with your heart to the Lord; giving thanks always for all things in the name of our Lord Jesus Christ to God, even the Father.—Eph. 5: 19, 20, R. V.

What a blessing it would be to the world if we all carried out this command. St. Paul told the Christians to make the most of their time because the days were evil. It was a great opportunity for victorious living. Instead of spoiling the happiness of others by useless complaining, or destroying their own peace

of mind and health of body by brooding over their troubles, they should sing and make melody with their hearts to the Lord, and give Him thanks "always for all things."

For more than three years the world has been staggering under a heavy load of pain and anxiety. Even in Canada—in spite of material prosperity—this awful war brings sorrow—or should bring sorrow—to every man and woman. Even if the death angel has not entered our own door, we are not hardhearted enough to treat with indifference the troubles of our neighbors.

And yet our Government has called us, as a nation, to return thanks to God; and St. Paul has reminded us that our duty, as individuals is to give thanks "always for all things."

It is nearly 300 years since the first national Thanksgiving Day was kept in America. A brave little company of men and women had started out to make a home for themselves in a new country. When the first terrible winter was over about half of the exiles were laid in their graves: "the living were scarce able to bury the dead, the well not sufficient to tend the sick." But they toiled on bravely, planting the precious seed-grain (which was sorely needed for food) trusting unflinchingly in God, and never losing heart.

Do you wonder that when their first harvest was gathered in they appointed an annual Thanksgiving Day? Starvation had stared them in the face and had been driven away. Though the year had been a hard one, and death had thinned their ranks, yet they had good reason to thank God for His gift of the harvest.

Perhaps it is because we, in Canada, have had no experience of famine that we take God's gifts of grain, vegetables and fruit as a matter of course. Last year potatoes were scarce, and this year we are thankful because there is a plentiful crop of potatoes. If we—like millions of people in Europe—were fighting famine conditions, we should learn how to return thanks for our bountiful harvest with real heartiness.

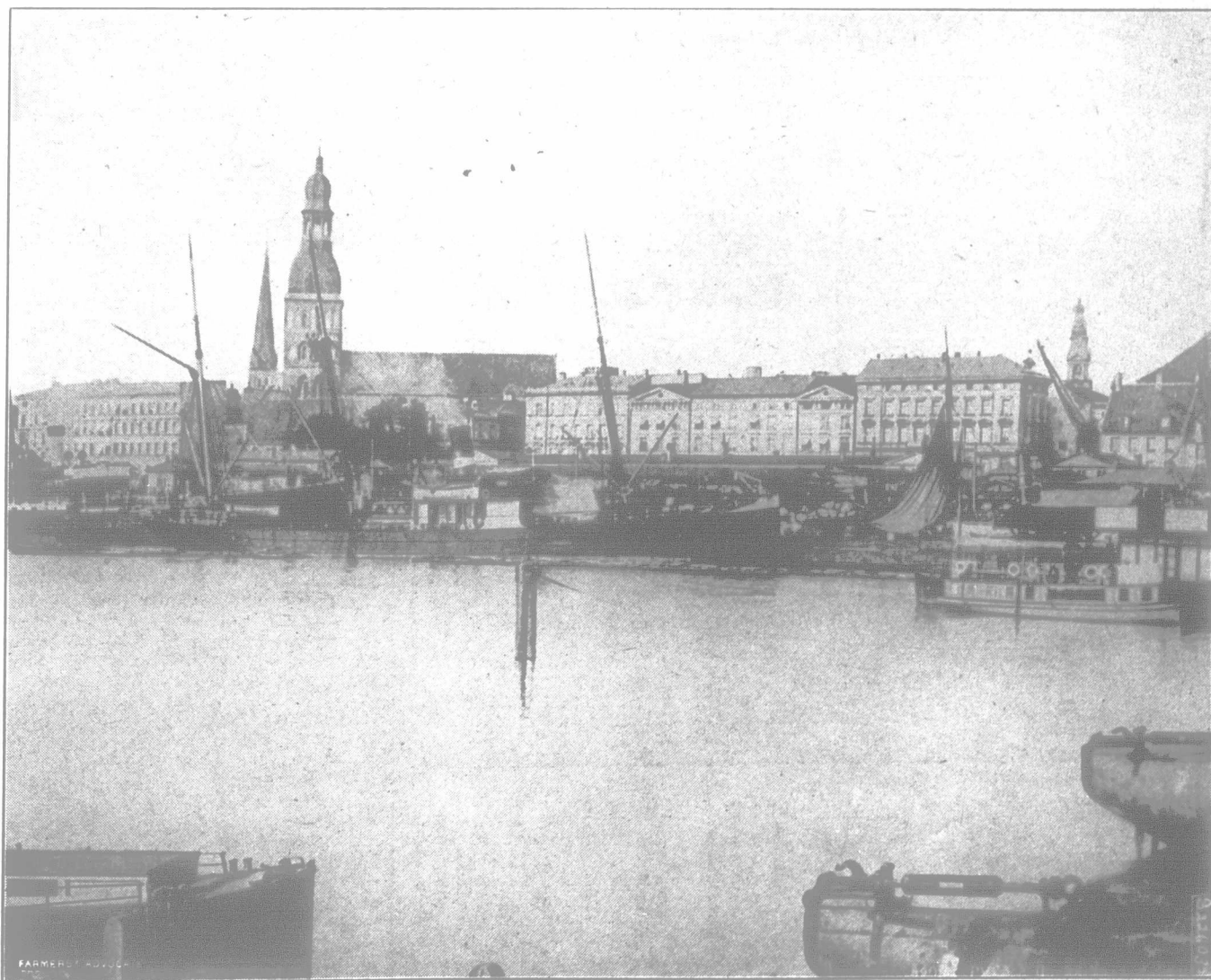
A farmer works hard for his harvest, and perhaps forgets that no hard labor on his part can make a grain of wheat, an apple or a potato. He may plant seed, and cultivate the ground with energy and skill, but only God is able to work the great miracle of the multiplication of the loaves.

Do we thank Him for His gifts, or do

we accept them as our right? Perhaps we say proudly: "My power and the might of mine hand hath gotten me this wealth!" forgetting that it is God only who giveth power to get wealth. How helpless we are when the season is too hot and dry, or when the rain comes down in torrents and there is no sunshine to ripen the crops. Unless God had placed within the seed the mysterious power of reproduction, it would be useless for a hungry world to look to the farmers for food. If you plant a dead seed all your skill and hard work will produce no increase. Think of the great wheat fields in the West. Can the farmers carry enough water for those millions of thirsty plants? Can they make the quickening sunshine? God has sent His mighty servant—the sun—to work for us. The sun not only pours down his rays, giving life to each green blade, but he also carries water from the sea high into the air. The wind blows this soft water (freed from the sea salt) far inland. There it is sprinkled gently down upon miles and miles of grain. We are ready enough to complain if the weather is not to our liking. Are we as quick to return thanks when blessings are showered on our unworthy heads? But every day should be a thanksgiving day; we have our orders to give thanks "always for all things." I have seen men and women who carried their heavy cross of pain and poverty not only without complaint but with bright cheerfulness. That is victorious living. Such brave souls are an inspiration and a help to us all. If they scorn self-pity, what right have we to make a fuss over trifles?

But we must have something to be thankful for, or else cheery words and bright smiles are unreal and insincere. Of course we must, and there is the testing of our Christianity! Do we love God, or only love His gifts? Can we rejoice in His love for us, or are we always looking for the "loaves and fishes?" Do we live righteously for our own earthly advantage—because honesty is the best policy—or do we think the service of God is a priceless privilege, even though it may lead to the martyr's cross?

St. Paul rejoiced in the love of his Master, even though he expected to sacrifice all earthly blessings for His sake. "I am ready," he exclaimed to his weeping friends, "not to be bound only, but also to die at Jerusalem for the name of the Lord Jesus." He knew that nothing could separate him from the love



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Stock-Taking Sale Your Opportunity To Buy a High-Grade Piano at a Low Price

Our season of annual stock-taking brings many unusual piano-buying opportunities to you, no matter in what part of Canada you live. October 31st has been set as our stocking date, and we are determined to clear out every piano listed below before that time. Stupendous price reductions have been made. Values are wonderful. Study the list. Benefit by the bargains. The nearest mail box finds you with the store.

Here are the Bargains

NORDHEIMER: 7½ octave upright Piano by the Nordheimer Piano Company, Toronto, in Walnut case, with plain panels without carvings. Has been thoroughly repaired and is in first class order. **Stock Taking Sale Price, \$210**

PRINCE: Full size 7½ octave cabinet grand upright piano by The Prince Piano Company, Toronto, in Walnut case, with full length, plain polished panels and music desk; has three pedals with muffer; ivory and ebony keys. **Stock Taking Sale Price, \$235**

MENDELSSOHN: 7½ octave upright Piano by the Mendelssohn Piano Company, Toronto, in rich Mahogany case with full length music desk; three pedals; ivory and ebony keys. A sweet-toned piano in A-1 condition. **Stock Taking Sale Price, \$248**

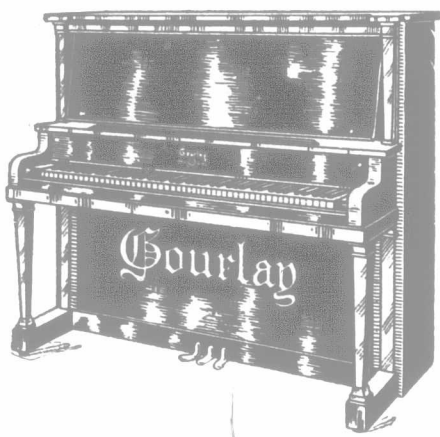
HAINES BROS., N. Y.: 7½ octave cabinet grand upright piano by the original Haines Bros. Company, New York, in richly figured Rosewood case. The piano is a very choice instrument, has been thoroughly re-constructed and re-finished in our repair factory and possesses a splendid tone that will give many years of service. **Stock Taking Sale Price, \$248**

NEWCOMBE: 7½ octave cabinet grand upright piano by The Newcombe Company, Toronto. This piano is an expensive style of this make in Walnut case of fine appearance with three pedals, ivory and ebony keys etc. Is in perfect order and an excellent bargain. **Stock Taking Sale Price, \$265**

BELL: A very handsome cabinet grand piano by The Bell Co., Guelph, in rich dark Mahogany case; full length panel and music desk; Boston fallboard; three pedals; ivory and ebony keys etc. Looks just like new. **Stock Taking Sale Price, \$285**

MENDELSSOHN: Another just like new piano, the largest and most costly style by The Mendelssohn Company, Toronto, in rich Walnut case of modern design, with the full length panel; ivory and ebony keys; three pedals, etc. **Stock Taking Sale Price, \$285**

GERHARD HEINTZMAN: Large cabinet grand piano by Gerhard Heintzman, Toronto, in Burl Walnut case, plain polished panels; ivory and ebony keys. The piano has been thoroughly repaired and is in perfect order. **Stock Taking Sale Price, \$290**



GOURLAY: Slightly used Gourelay piano—the \$500.00 style, medium size, in richly figured Walnut case. The style of this piano is quite the same as one we are illustrating in the present catalogue and its use is not apparent in either tone or appearance. An extra special bargain at the **Stock Taking Sale Price, \$315**

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of Christ, and so he was able to glory in tribulation, distress, persecution, famine and the sword.

We should not only thank God in words, but also show forth praise in our lives, "by giving up ourselves to God's service, and walking before Him in holiness and righteousness all our days."

Many earnest preachers have tried to drive men into the narrow way by the German method of "frightfulness." They have pictured the terrors of hell in lurid colors in order to frighten souls from the broad way which leadeth to destruction. That kind of sermon may sometimes be necessary—as it is sometimes necessary to amputate a man's leg in order to save his life—but God wants whole men in His army, "happy warriors" instead of conscripts driven forward by craven fear.

Read that wonderful invitation of our King in the sermon on the Mount. Look at our Brother's shining face as He looks tenderly down on the heart-sick and soul-hungry people, grouped below Him on the mountain side and offers them the priceless gift of blessedness. He tells them that the golden flower of joy can grow and thrive in the desert of sorrow. "Blessed are ye, when men shall revile you and persecute you, and shall say all manner of evil against you falsely, for My sake. Rejoice, and be exceeding glad; for great is your reward in heaven."

Again, after His Resurrection, the gift of blessedness was offered to those who have not seen Him and yet have believed. That blessedness is ours if we will.

St. Paul, spending his life in willing service, found out by experience the truth of that other beatitude: "It is more blessed to give than to receive"—Acts 22:35.

And, at the very end of our Bible, we find the same invitation to us to be happy—the call of Him who is our Alpha and Omega: "Blessed are they that do His commandments. I Jesus have sent mine angel to testify unto you these things in the churches."

The fruit of the Spirit is Joy and Peace, as well as Love. Unless we are earnestly trying to make each day a thanksgiving day, by giving thanks always for all things unto God, then we are disobeying our Master's orders and hindering His work.

"A thousand times more good than I deserve,
God gives me every day."

DORA FARNCOMB.

Gifts for the Needy.

Two readers have this week sent gifts for the Quiet Hour purse—\$5 came from Mrs. H. and \$1 from Mrs. D.

Some of this money has gone to help a sick woman, whose husband died a few weeks ago, leaving her with six children under 13 years of age. She asked me to thank her kind friends of the Farmer's Advocate.

The Ingle Nook.

[Rules for correspondence 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.]

RIGHT opposite the window before which is the table at which I work, is a long flat gravel-covered roof that runs a full block. Workmen have been doing some repairing there, of late, and it is covered with boards, bits of tin, shreds of paper, and boxes of nails. It is not pretty. But beyond it, where the Grand Opera House pushes up a huge cube of red brick into the sky, are my trees. I always call them mine, because they are the only things in the vista which seem to belong to me. I have written of them before.

Just now they are dropping their leaves, and so they carry me on to the many woods, so much farther from me and so much nearer to you, where, to-day, there is no constant roar of traffic, no whistles, no scraping of street-cars, no tramp-tramp along sidewalks, but only the wind in the tops of the trees, the light tread of a bounding squirrel or rabbit, and the soft indescribable chick

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BLACK WOLF SET

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- 310—Canadian Mink Stole; full animal style, plain round back; finished with heads and tails; made to fasten up closely at neck; beautiful quality dark mink skins; soft silk linings. Price \$55
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- 1710—Canadian Beaver (Plucked) Stole; wide over shoulder, plain round back; fronts finished with two silk ornaments; best quality soft silk linings. Price \$40
- 330—Arctic White Fox Neckpiece; full animal style; finished with head, paws and large natural tail; made from beautiful quality full-furred skins; paws fastened across front. These are made up single and double styles making a handsome fur \$50

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of falling leaves and nuts. Your woods to-day, will be filled with color, crimson and green mottled on a background of pale straw-color and gold, with all the shades of clear amber and brown in the shadows beneath, where the little low woody plants still hold up their fronds, emerald, almost, as in spring. And in the farther distances, softened by the haze of autumn, there will be lurkings of blue and gray and purple. Look long enough, and closely enough, and you will see all of these things. And perhaps you will go home with a wisp of feathery wild clematis, now in silky seed, and a spike of blue cohosh berries, and another of the red fruit of the Indian turnip, and a bit of fern, and some trailing pigeon berry,—for a last centerpiece for your dining table. Or it may be that your gleanings will be a branch of scarlet haws and a garland of wild grapes almost purple in richness.

When you go to your woods I hope there will be a friend with you. For after all it's the human in life that makes life worth living. There is nothing in all this world like a friend—whether that friend be child, or husband, or brother, or sister, or just friend. Beautiful as Nature is—perfect, if left alone—she must be always inanimate, a beautiful background to friendship, but not an integral part of it. I think, as a rule, we do not value friendship enough, nor exert ourselves enough to make ourselves fit for it and worthy of it.

BUT it is not in the woods alone that you find Nature, the great artist, abroad these autumn days. In the garden, where bare brown earth is the carpet for all there is still the bright green of parsley and parsnip and carrot tops; and beyond is the faded gold, perhaps, of some frozen corn, with orange pumpkins burning like small fires of concentrated summer. I am sure you like to be out these days. It is a joy to dig up the root-foods, and know that here is a store worth while for winter months. It is a joy to feel the pleasant breezes of autumn, and to look at the hazy sky. It is a joy just to be out of doors. And yet one does not feel as in spring. Then there is growth, and life and energy in the air. Now there is a sort of sleepiness, dreaminess. If one had not so much to do one would be listless, and retrospective and perhaps a bit pensive. Why is it that we seem to value most the things that are just slipping away from us, as is this summer weather? But summer will come again, and also perhaps, all the other things good for us which we have wanted and "lost a while".

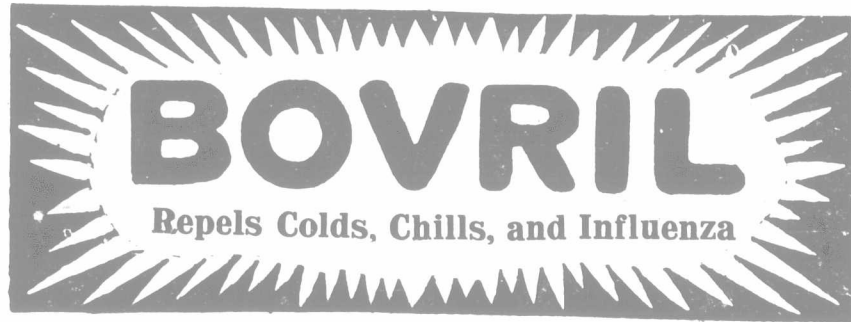
THE king is dead. Long live the king! Summer is passing, but winter is coming. And winter may be a friendly sort of visitor too, if a bit blustery. At least he gives opportunity for doing many things for which one has little time during the rest of the year.

I am thinking now of something that looks a very small thing, yet may prove both interesting and profitable—if you consider satisfaction for the time spent profitable and do not measure everything by money. This is it: Have you ever made a scrap book?

Now I'm sure you weren't expecting that, and it may sound a bit silly. But I think everyone should keep at least three scrap-books, one for bits of choice poetry and prose, another for tried and proved cooking recipes, and a third (with smooth, blank paper, easily written upon) in which one may jot down, from time to time, bits of wisdom and striking paragraphs from the books one reads.

It is very interesting to do this, and very helpful, and the winter gives time for such things, except to very busy folk indeed. For it requires just a few moments—if one has the scrap-books at hand—to clip out and paste a clipping now and again, or to take a pen and write one down if clipping cannot be done. In doing this one concentrates, unconsciously, on the matter in hand and so remembers better. Afterwards, too, in picking up the book, even for a moment, one is sure to come upon some thought that is worth while. Left to ourselves wholly, our thoughts are not always worth while, and so the scrap-book becomes a sort of refuge from ourselves, pilot, rather, to point us forth on new roads.

Of late I have been jotting down thoughts from several books I have been



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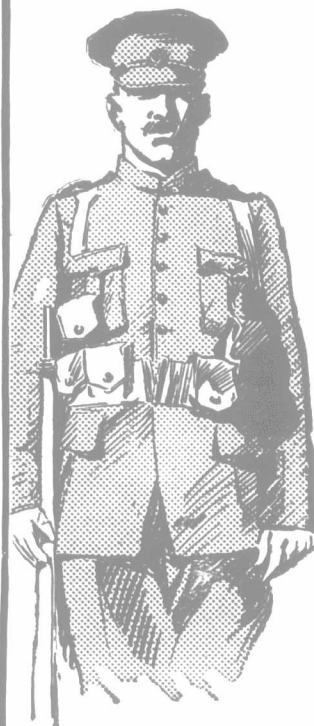


Pay Will Be The Same

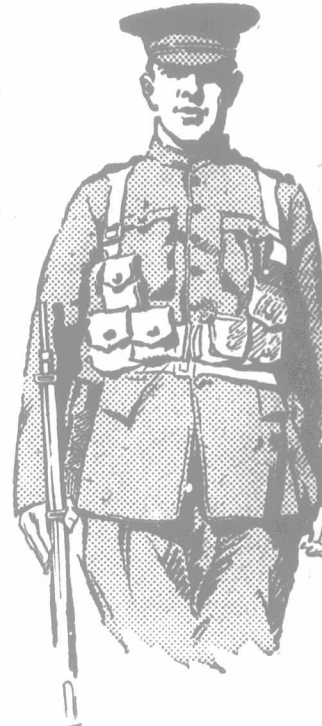
Men selected under the Military Service Act will receive the same pay as those now on active service receive. Pay will start from the time a man reports for duty. Money from the Patriotic Fund and Separation Allowance will also be available for selected men.

Canadian soldiers are well paid. The fact that wages in Canada are generally higher than those paid in Europe is recognized in the system of remuneration for men on active service. Clothing and all equipment in addition to food is also supplied to the Canadian soldier, leaving him with no expense except personal incidentals.

The rate of pay for men in the Canadian Expeditionary Force, other than commissioned officers, is as follows:



	Pay	Field Allowance
Warrant Officers	\$2.00	30 cts.
Regimental Sergeant-Major, if not a Warrant Officer	1.85	20 "
Quartermaster-Sergeants	1.80	20 "
Orderly Room Clerks	1.50	20 "
Orderly Room Sergeants	1.50	20 "
Pay Sergeants	1.50	20 "
Squad, Batt., or Co. Sergt.-Major	1.60	20 "
Colour-Sergeant or Staff-Sergeant	1.60	20 "
Squad, Batt., or Co. Q.M.S.	1.50	20 "
Sergeants	1.35	15 "
Lance-Sergeants	1.15	15 "
Corporals	1.10	10 "
Lance-Corporals	1.05	10 "
Bombardiers, or Second Corporals	1.05	10 "
Trumpeters, Buglers, and Drummers	1.00	10 "
Privates, Gunners, Drivers	1.00	10 "
Sappers, Batmen, etc.	1.00	10 "



As in the case of those already gone overseas, Separation Allowances will be available for those dependent for livelihood upon selected men. The Separation Allowance is \$20.00 per month for the rank and file, \$25.00 for sergeants and staff-sergeants and \$30.00 for warrant officers. The experience is that many men can afford to assign half their pay to dependents, in addition.

A considerable number of men who have enlisted in the Canadian forces have found themselves better off under the army rate of pay, which is granted in addition to board, lodging, clothing, equipment, transportation, etc., than they were while in civilian positions. Their wants are provided for, and they receive a steady addition to the bank account each month.

Issued by
The Military Service Council. 142

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There will also be sold the Clydesdale stallion, Pride of Skog (Imp) (11687) (L339) by Pride of Blain (19837).

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reading, and have been much struck by the number of really fine things one comes upon even in the fiction of to-day—provided one keeps to the works of the really high-class writers. It is suggestive to notice that, more and more, our fiction writers are turning to philosophy. It is not enough nowadays, to write mere adventure, or an interesting story; one must write with literary quality, with the psychological quality, and one must reach conclusions in regard to life.

Many of you know Hickens' great novel "The Garden of Allah", which has made the wonderful Sahara live before us almost as though we had visited it. But not so many of you may know his "Dweller on the Threshold", and a newer one which, as yet, I have only partly covered, "In the Wilderness".

Quotations from these two lie in a little book before me, as I write, and I am going to copy a few of them a second time for you. But it will have to be next time, for I cannot spare the space to-day.

ANOTHER use you will find for a scrap book,—viz., to entertain a guest during moments that you cannot devote to her, or to start conversation on lines that are sure to carry one away from gossip. I suppose we all gossip, more or less, but I am equally sure that after an hour of it, especially if it has been in the least of the backbiting order, we all feel mean, lowered somehow, stepped off the plane which we have set for our best selves. And, indeed, that is exactly what happens. We lower ourselves every time we give way to unkindly gossip.


So, from this, too, the scrap-book affords a Cave of Adullam. It provides new subjects of conversation,—and naturally, too. Dragged-in conversation is seldom a success, but if your guest dips into your scrap-book she is almost sure to come on something upon which she wants to comment, and so from that the talk grows of itself, as it were.

FOOD-pledge cards are being distributed in the cities—I do not know whether they are reaching you or not—and are meeting with a varying reception. So far as I can understand, many people are confusing them with the high cost of living, with which, unless I am very much mistaken, they really have nothing to do. Surely the underlying idea is, not to make things cheaper for us, but to liberate more of the necessities—wheat and beef, above all—for the armies at the front. It is for this reason that we are asked to use whole wheat bread, cornmeal, etc.,—to liberate more white flour,—and fish and mutton instead of beef—to liberate more of the latter for the trenches. Once we fully understand the situation I have an idea that the most of us will fall into line without further urging. But I confess that personally, so far, I have not been able to wade through to full understanding of the matter, and I am afraid that the majority of the women who are presenting the pledge cards know no more about it than I do. The whole thing is so complicated. For instance, it this whole continent takes to eating whole wheat bread, up still higher will go the price of bran and shorts, fed to dairy cows and young farm animals, and, since farmers cannot produce at absolute loss, the dairy and meat production must of necessity be lessened.

Well it's all hopelessly muddled up in my own brain, but I'm still hoping for light, and shall be glad to hear from any of you who feel that you have "got anywhere" in regard to the question. Of one thing only I am sure—that we all want to do the square thing by the boys in the trenches if we can only see clearly how to do it.

Some people seem to have the idea that the Food Controller seeks to deprive us of things we should have, but surely this, at least, is beside the mark altogether. We are neither required nor requested to starve ourselves; we must keep fit and so we must be well fed. The things we are asked to do, clearly, is to make use of substitutes for the things most needed at the front. There are plenty of substitutes, so surely it is no great hardship to do this for the sake of the lads who are suffering so much for us.

A much fairer criticism is the demand, heard from many quarters, that absolutely no grain fit for food shall be used to make alcoholic drink. This is a



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perfectly. V mand. V especially should m used up a serves no weaken n too,—for lands bec stronger l classes of fathers s a practice children? It is o many thi our right the bright to come, earth—to food and the manu Then th ing, but l water. C in the p a fortune his utmo traitor n humanity the boys surely be P. S.— in my W issue. T in the t "8.8 oz." bread.

For M from cot (1). S our milk strong soa (2). M 2 of soft s the juice on both on the gr disappear

For "A We sho candied in orange pe Keep the enough ha strips, pu soon as th change, ar tender ad and boil Turn on a roll in p Perhaps s hand exp write us.

Some l Gible 5 heart, liv other fowl spoon flour Wash the stew in s in a sauc not let it stewed i have on then add simmer 10 hot platter Mutton mutton, 5 spoons bu crumbs, s baking di dish with sliced cold tomatoes. salt and the top la crumbs e Bake in a Apples cup rice, 1 cinnamon into halv baking-dis with butte the rice i and put i milk and add suga cinnamon. the rice o baked app maple-syr Vegetabl

perfectly legitimate and reasonable demand. Why, indeed, at any time, but especially in this time of dire need, should millions of bushels of grain be used up annually in making a drink that serves no purpose save to degrade and weaken men?—Yes women and children, too,—for it is no secret that in the old lands beer-drinking, and even drinking of stronger liquor, is common among certain classes of women. When mothers and fathers stupefy themselves with such a practice, what can be hoped for the children?

It is our privilege to deny ourselves many things for the soldiers, but it is our right, as citizens of the world—of the bright and shining world, that is to come, right here on this war-torn old earth—to demand that the nations' food and strength be not imperilled by the manufacture of strong drink.

Then there is the question of profiteering, but here indeed one steps into deep water. One thing is sure, the profiteer in the present world-crisis, who amasses a fortune through the war without giving his utmost towards stopping it, is a traitor not only to himself but to all humanity. When the war is over and the boys come back, if not before, he will surely be set in his true place. JUNIA.

P. S.—By the way there was a mistake in my Western Fair report, Sept. 20th issue. That "8 lb. 8 oz." of bread, in the table given, should have been "8.8 oz."—1 quart of milk equal to 8.8 oz. bread. JUNIA.

To Remove Mildew.

For M. H. D.—To remove mildew from cotton try one of the following:
 (1). Soak for 24 hours or more in sour milk or buttermilk, then wash in strong soapsuds, rinse and bleach.
 (2). Mix together 1 spoonful salt, 2 of soft soap, 2 of powdered starch, and the juice of a lemon. Place some of this on both sides of the stain, then leave on the grass out of doors until the stain disappears.

Candied Peel.

For "A Nova Scotian".
 We should imagine that citron could be candied in the same way as lemon and orange peel. The method is as follows: Keep the rinds in mild salt water until enough has been collected, then cut into strips, put in cold water, and boil. As soon as the water tastes salty and bitter change, and repeat with cold water. When tender add sugar to make a thick syrup and boil down until the peel is clear. Turn on plates to dry. When half dry roll in powdered or granulated sugar. Perhaps some one who has had first-hand experience with the citron will write us.

Some Economical Recipes.

Giblet Stew.—Take the wings, neck heart, liver and gizzard of a chicken or other fowl; 1 tablespoon butter, 1 tablespoon flour, 1 tablespoon chopped parsley. Wash the parts of the chicken named and stew in salty water. Melt the butter in a saucepan and add the flour, but do not let it brown. Add the stock off the stewed chicken and any gravy you may have on hand and stir until smooth, then add the parsley and the meat and simmer 10 minutes longer. Serve on a hot platter with plain boiled rice around.

Mutton and Tomato Pie.—Some cold mutton, 5 or 6 tomatoes, 2 heaped table-spoons butter or dripping, some bread crumbs, seasoning. Spread a greased baking dish with crumbs and fill the dish with alternate layers of thinly sliced cold mutton and slices of peeled tomatoes. Season each layer with pepper, salt and little bits of butter. Make the top layer of tomatoes sprinkled with crumbs covered with melted butter. Bake in a moderate oven for 3/4 hour.

Apples with Rice.—Five apples, 1 cup rice, 1 pint milk, sugar, a little butter, cinnamon. Core, peel and cut the apples into halves. Place them in a deep baking-dish, sift a little sugar over, dot with butter, and bake quickly. Have the rice boiled for 10 minutes, drain, and put in a double boiler. Add the milk and cook until it is absorbed, then add sugar, a little butter and some cinnamon. When ready to serve put the rice on a hot platter, arrange the baked apples on top, and serve with hot maple-syrup or sugar syrup.

Vegetable Hot-pot.—Five tablespoons

STANFIELD'S

Unshrinkable UNDERWEAR




Made and Worn by Two Generations

Over a quarter of a century ago the late C. E. Stanfield, Pioneer underwear manufacturer of Truro, N.S., discovered a way to prevent woollen underwear from shrinking—by the radical but sensible plan of taking the shrink out of the wool before it went to the knitting machines.

From the very first, the sterling quality of Stanfield's Underwear, as proved by wear and washing, has been its most prominent feature. It actually DOES NOT SHRINK "full up" nor mat—and on the basis of length of service it is the best value offered in underwear.

Stanfield's Original Pure Wool; the Universal Favorite with Outdoor Workers. Wonderfully warm and absorbent. Red, Blue and Black Labels—regular, medium and heavy weights.

Mothers will be specially interested in the wonderfully handy Adjustable Combinations and Adjustable Sleepers for growing children. Simply moving the buttons on the waist allows for two to three years' growth, and the detachable lower part is a great convenience.

Write for Free Sample Book
 showing over a dozen weights and textures, from the lightest Silkwool to the heaviest ribbed goods for Outdoor Men.

STANFIELD'S LIMITED, - TRURO, N. S. 21



This Engine Will Cost You Nothing

You need an engine—get a Gilson on our new, easy-payment plan, and it will pay for itself. You have the work for it to do this Fall and Winter, help is scarce and high-priced—save yourself a lot of worry and enjoy that "feeling of security" which is such a definite part of the staunch, reliable Gilson Engine.

Gilson Engines have long enjoyed an indisputable reputation of dependability, power, simplicity, and economy. This year finds us with an even more attractive proposition for the discriminating buyer. Prices of everything you have been buying have been soaring, but, by careful management, we are able to furnish Gilson Engines at remarkably low prices. Write to-day for catalogue, price, and easy-payment plan, stating what size you are interested in.

Gilson Mfg. Co., Ltd., 259 York St., Guelph, Ont.

Auction Sale of 400 Head of Stock— Horses, Cattle, Sheep, Hogs

LOCKE & McLACHLIN, auctioneers, will sell for
 C. F. JACKSON, three miles west of St. Thomas, Ont.
Friday, October 12th, 1917

40 young horses, 35 good dairy cows, 100 yearling steers and heifers, 30 two-year-old steers, 25 steers weighing from 1,000 to 1,200 lbs., 2 purebred Durham bulls, 2 purebred Holstein bulls, 25 ewes, 25 ewe lambs, 10 brood sows, 100 shoats weighing about 100 lbs.

Come early and inspect the stock. Sale starts sharp at 12 o'clock.
 TERMS—Six months' credit on approved notes.

BREEDER'S SALE OF 30 High-class Shorthorns

TWENTY-FOUR FEMALES—TWO YOUNG BULLS

Crediton, Ont., Wed. Oct. 24, 1917

Families—Miss Ramsdens, Lovelys, Wimples and Vanities. A choice lot of fashionably bred cattle.
 Catalogues now ready. See later issues for further particulars.

H. OESTRICHER & SONS, CREDITON, ONT.
 Exeter and Centralia Stations, G. T. R.

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 50 cents.

CANADIAN RINGLET BARRED ROCKS—50 one-year-old hens for sale, and two prize males, at once. Hens \$2.00 each. Will lay through the winter. F. Coldham, Barriefield, Kingston.

Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted and Pet Stock.

TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

FIRST-CLASS FARM, ELGIN COUNTY, FOR SALE—200 acres; brick house and first-class buildings; plenty of water, good bush and good orchard. Apply Box 142, Springfield, Ont.

FARM FOR SALE—CONTAINING NINETY-six acres, six acres bush, balance in high state of cultivation and fertility; being used as a stock farm for nearly forty years, well known as Maple Grove Stock Farm. Situated in the dairy district of Oxford Co., East Zorra Twp., which is the finest section of country in Ontario. Buildings are practically new and fill all requirements. Drilled well at buildings and never-failing spring brook. If interested write H. Bollert, Tavistock, Ontario, R. R. No. 1.

FOR SALE—FIRST-CLASS DAIRY FARM; 10 miles from London. Apply Box "N", Farmer's Advocate, London, Ont.

WANTED

LARGE HENS

Poultry of all kinds. Write for Price List
WALLER'S 702 SPADINA AVE. TORONTO

Fetherstonhaugh & Co.
 The old established firm. Patents everywhere. Head Office Royal Bank Bldg., Toronto. Ottawa Office, 5 Elgin Street. Offices throughout Canada. Booklet free.

Fresh from the Gardens

of the finest Tea-producing country in the world.

"SALADA"

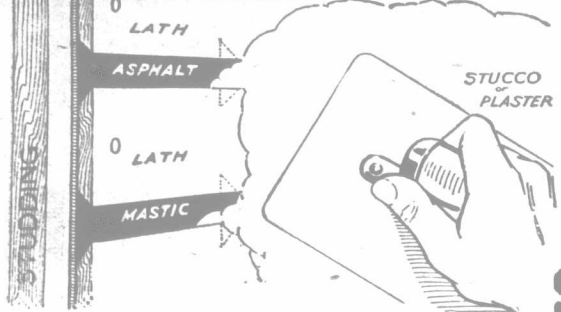
TEA

B 74

Sealed Packets Only.
Try it—it's delicious. BLACK GREEN or MIXED.

HAVE YOU THOUGHT OF

THE DOVETAILED LATH STUCCO



as a finish for your new house—as a renovator for your old one—as a substantial, permanent, yet moderate-priced material for the walls of barn, garage or granary? It looks fine—costs nothing for paint or upkeep—and when applied on a foundation

BISHOPRIC STUCCO BOARD

IT NEVER CRACKS OR COMES OFF.

Bishopric Stucco Board is made of tough, heavy sheets of Asphalt Mastic, surfaced on one side with sulphite fibre board, and reinforced on the other with No. 1 kiln-dried, bevel-edged lath. It is nailed direct, lath side out, to the studding, or on the siding of an old building. The Stucco is CLINCHED in the dovetailed spaces between the lath, and is there TO STAY.
Bishopric Stucco Board thus takes the place—does the work—and saves the cost—of lath, furring strips, building paper and sheathing lumber, at but little over half the total cost.
Write for sample and descriptive Booklet, showing houses built the economical Bishopric way. If plaster is not required, Bishopric Stucco Board can be used, applying the lath side to the studding—fibre board will then prove an excellent decorative surface for any class of decoration.

BISHOPRIC WALL BOARD CO., LIMITED
529P Bank Street, Ottawa, Ont.

THE BIG IMPORTATION OF ROMNEYS

WERE ALL SOLD IMMEDIATELY UPON ARRIVAL AT THE FARM



A New Importation of 100 Yearling Ewes will leave England October 15th next. These ewes have been bred to the best rams and are from the best Romney flocks of England.

We are offering also a number of **SHORTHORN HEIFERS**, ages 28 to 36 months, of some of the best families of the breed—Clementinas, Minas, Clarets, Lancasters, Village Girls and Marthas. All are bred to our choice Bruce Rosewood bull. These will be sold right.

J. H. Patrick & Son, Ilderton, Ontario

When writing advertisers will you kindly mention The Farmer's Advocate.

butter or drippings, 3 onions, 3 carrots, 1 stalk celery, 1 teaspoon salt, 1/2 teaspoon pepper, 1/4 peck string beans, 1 lb. potatoes, 1 bunch parsley, 1 1/2 pint stock or water, 6 tablespoons flour. Melt the butter or drippings in the pot, add the vegetables and cook for 10 minutes until a nice light brown color. Remove the vegetables, add the flour and cook until brown, then add the seasoning and the stock or water. Bring to a boil, then add the vegetables and cook gently for 2 hours. A slice of fat bacon or pickled pork, laid on top of this dish when cooking will add greatly to the flavor.

Carrot Marmalade.—One dozen raw grated carrots, 1 cup sugar to each cup carrots, strained juice of 3 lemons, 1 teaspoon cinnamon, 1 of cloves and 1 of allspice. Mix the grated carrots with the sugar and let stand over night. In the morning add the lemon juice and spices. Cook slowly for one hour. The spices may be omitted if not liked.

Cole-Slaw.—Shred the white part of a firm cabbage and soak in cold salt water for an hour. Drain and add white mustard seed and celery seed for flavor, then pour over the following dressing: Take 4 tablespoons butter, 1 tablespoon sugar, 1 tablespoon flour, 1 teaspoon mustard, some cayenne pepper, 1 teaspoon mustard, some cayenne pepper, 3 eggs, 1 cup milk, 1/2 cup vinegar, 1/2 teaspoon salt. Set the butter to melt, then stir in the flour, and, when smooth, the milk. Let come to a boil. Beat the eggs and mix into them the other ingredients, adding vinegar last. Stir the eggs into the boiling mixture and stir until like thick custard. Keep in a cool place and use just as much as is needed to the cabbage for one meal.

Glorified Hamburg Steak.—One pound Hamburg steak (minced beef), 1/2 cup bread crumbs, 1 stalk celery, 1 egg, salt, pepper, red pepper, and grated nutmeg, 1/2 teaspoon scraped onion, 6 medium sized onions, 3 small carrots, a little chopped parsley. Put the steak in a basin, add the chopped celery, crumbs, egg, parsley, scraped onion and seasonings, also a little melted butter if it seems too dry. Form into a loaf and place in a baking dish. Slice the carrots lengthwise, peel the onions, and place all around the meat. Pour in boiling water to half cover the loaf. Have the cover tight, and let the contents of the pot simmer at the back of the stove for about 3 hours. Season the gravy with salt and pepper during the last half hour, and 15 minutes before serving remove the cover to let the meat brown. Serve on a hot platter, removing to it first the meat and vegetables and thickening the remaining gravy with a little flour and butter rubbed together. Pour the thickened gravy around.

Storing For Winter.

Potatoes.—Put potatoes, not too deep, on shelves in the cellar, and keep absolutely dark to prevent sprouting. From time to time pick them over and remove any which show signs of decay, as these will infect the others. The temperature should be cool but should never reach freezing point.

Apples.—Apples may be kept same as potatoes. Wrap very choice fruit separately in thin paper.

Onions.—Let ripen and dry perfectly before storing. Keep in slat boxes or twine bags in a dry cool place. Onions should at all times have a free circulation of air through them. Sort over from time to time and remove any that are sprouting.

Squash.—Keep in a warm dry place, covered with old cloth or straw.

Cabbage.—May keep for some time on shelves (if pulled up by the root) in a cool place. Or may be pitted in a very dry spot. Pile on straw, heads down, cover with straw then with earth. A large pit should have an air vent—a bit of pipe of any kind—set in the peak of the pit. In very cold weather plug this with straw.

Beets, carrots, parsnips and salsify.—Pack in moist sand in the cellar. A few parsnips and salsify may be left in the ground where they grew for use in spring.

Celery.—Put a layer of moist sand in a box and on it pack the celery, root end down. Keep the room dark, and allow free circulation of air.

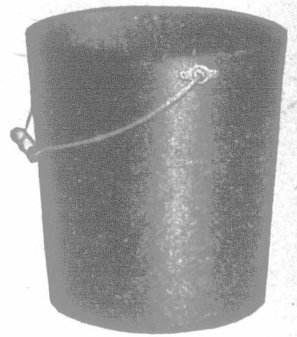
Tomatoes.—If vines with large green tomatoes on them are pulled up by the

Do you belong to the Better Milk Brigade?

Are you striving to do "your bit" by providing more and better milk for the babies of Canada, who will one day take their places in the affairs of the world?

If you are we have something which will interest you. A milk pail which does not give the milk that woody or tinny taste because it is made of the modern

Indurated Fibreware



The ware which does not transmit taste, is easily cleaned, light to handle, and of wearing qualities unsurpassable. Write for particulars of our Indurated Butter Tubs, Milk Pails, Milk Pans, etc.

THE E. B. EDDY CO.
HULL, CANADA



Cut Your Own Feed

Our feed cutters embody the latest improvements for lessening the danger and inconvenience of cutting, and do their work quickly, easily, satisfactorily. There's a machine that will exactly meet your requirements among the hand and power outfits of

Peter Hamilton Feed Cutters

They are made of the best materials throughout, and the knives are adjustable for cutting all kinds of fodder. Write To-day for Free Booklet. **PETER HAMILTON CO., Limited, Peterborough, Ont.**

How Much Profit

did you make this year on your farm? Can you answer this question satisfactorily? Or, are you in the position of many farmers who cannot, because they keep no business records from which to calculate whether they have made a profit or suffered a loss.

MANY CAN answer such a question because they realize it is as necessary to keep accounts on a farm as it is in any other commercial enterprise.

THE NEWMAN-BATES SYSTEM OF FARM BOOKKEEPING has been devised to meet the needs of the busy farmer who WANTS TO KNOW whether he is advancing or going behind in his business. This system is complete but is very simple, and does not require special training to operate.

THE system was highly recommended by two writers in the July number of the Agricultural Gazette of Canada.

If you are one of those who have been looking for a good system of farm accounts, write for particulars to

H.S. BATES, CHARTERED ACCOUNTANT
102 Bank St., Ottawa, Ont.

CHOICE STOCK

in Shorthorn Cattle, Poland China and Chester White Swine. Many are winners at the best shows. **GEO. G. GOULD, R. No. 4, Essex, Ontario**

When writing please mention this paper.

GREAT AUCTION SALE

**Pure-Bred and Grade Jerseys
Pure-Bred and Grade Oxford Sheep**
PROPERTY OF JAS. R. FALLIS, BRAMPTON, ONT.
OCTOBER 17, 1917

50=JERSEYS=50

30 grade Jersey cows (15 milking and 15 springing), 10 heifers in calf (mostly springers), 3 pure-bred bulls. Two yearling bulls, imported this year, and one yearling bull registered, dam has Record of Performance test of 11,197 lbs. milk, 533 lbs. fat and a calf within ten months.

300=SHEEP=300

80 Registered Oxford ewes and ewe lambs; 3 yearling and 17 ram lambs. 100 grade ewes (Oxfords and Shropshires); 100 grade ewes. All ewes are young and sound.

Sale will be held on the farm, two miles from station. Morning trains met by motors. Terms: Ten months' credit on approved joint notes. Discount for cash.

James R. Fallis, Brampton, Ontario

Important Credit Sale

Pure-Bred Jerseys, Shropshires, Yorkshires and Tamworth Swine

the property of J. B. Cowieson, at Queensville, Ontario,
on

MONDAY, OCTOBER 8, 1917

This offering in Jerseys consists of 5 bulls and 16 females. Among the males is the herd bull Kirkfield Choice, 5434, which is by Beulah's Raleigh 868 (Imp) and out of Meadow Grass 2nd (imp) five times a winner at Toronto Exhibition. Of the females several are fresh, some are springing, while others are not yet of milking age. They are a well-bred lot.

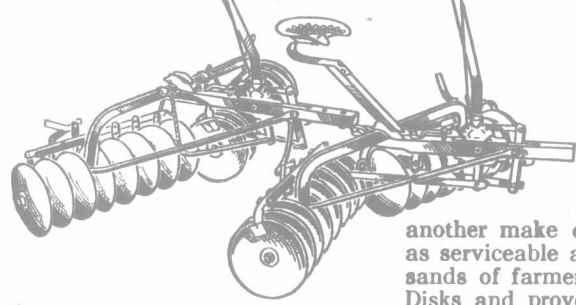
In Shropshires 20 breeding ewes, 5 ram lambs and 2 two-shear rams. Yorkshires and Tamworth pigs, (both sexes) of all ages; several sows of both breeds in farrow, others to farrow.

A number of standard bred horses and one draft colt will also be sold. As the farm has been leased there will be no reserve. All sums under \$25.00, cash; over that amount 12 months' credit, 6% off for cash.

The sale will be held on lot No. 20 on the 3rd Con. of East Gwillimbury, first farm east of Queensville Station, on Metropolitan Electric Line. Sale will commence at 1 o'clock sharp.

J. B. COWIESON, QUEENSVILLE, ONT.

Sizes for Horses or Tractors



Use the Bissell Double Disk Harrows. They have great capacity for cultivating, and have made a record for working the soil better than other disks—in fact, you won't be able to find

another make of Disk Harrow nearly as serviceable as the Bissell. Thousands of farmers have tested Bissell Disks and proved them to have the

"knack" for doing the best work. They are simple in design, durable and Built for Business. Write Dept. for Booklet. Man'd exclusively by—

T. E. BISSELL COMPANY, Ltd., Elora, Ontario

When stubble land is too hard to plow, use a Bissell Disk. It will make plowing easy after dishing—it will clean the ground and will increase the next crop.

root, late in fall but before they are frosted, and hung up in a dark place, the larger fruits will ripen.

The Dollar Chain

For the soldiers and all who are suffering because of the War.

Contributions from Sept. 21 to Sept. 28: "A Friend," Belgrave, Ont., \$10; "Reader of the Advocate," Howick, Que., \$1; Mrs. Le Touzel, London, Ont., \$1; "Scotia," London, Ont., \$1; J. E. McIntyre, R. 5, St. Thomas, Ont., \$10; "Toronto" (Hope), \$2; "In Memory of J. M. L.," \$5; "Helper," \$4.

Amount previously acknowledged \$4,901.30

Total to Sept. 28 \$4,935.30

Kindly address contributions to "The Farmer's Advocate and Home Magazine," London, Ont.

Exquisite models in Persian Lamb, Mink and Alaska Sable, as well as stylish, warm furs for men are shown in the big catalogue issued by McComber's Limited, 420 G St. Paul Street, West Montreal. Readers should write for a free copy. These furs can be purchased by mail and satisfaction is guaranteed.—Advt.

Gossip.

Since the advertisement of the Canadian Fairbanks-Morse went to press in a part of this issue a change in prices has taken place. The revised price will appear in the next issue or full particulars can be obtained by writing the firm.

Thirty Shorthorns.

Thirty Shorthorns will be sold at public auction by H. Oestricher & Sons, Crediton, Ontario, on Wednesday, October 24. The families represented are: Miss Ramsdens, Lovelys, Wimples and Vanitys. The catalogues are now ready and further particulars will appear in later issues. Get in touch with these breeders at once and learn all regarding the age and quality of the stock offered.

Shorthorn Sale at Ailsa Craig.

Attention is directed to the advertisement announcing the Morley Shorthorn sale at Ailsa Craig on October 9. Thirty-six Shorthorns will be dispersed at that time. It is an unreserved sale to settle an estate. Full information is printed in the catalogues which will be sent on request to Bertha C. Morley, R. R. 3, Ailsa Craig.

A Live Stock Sale of 400 Head.

Anyone wishing to purchase horses, good dairy cows, steers or heifers, ewes, ewe lambs, brood sows, or shotes will have a chance to do so at their own price on Friday, October 12, at C. F. Jackson's, three miles west of St. Thomas, Ont. Four hundred head of live stock will be sold at that time. Look up the advertisement in this issue and get full particulars.

Farm and Pure-bred Stock for Sale.

Attention is directed to the advertisement in this issue of Col. R. J. Stuart, Orono, Ontario. His beautiful farm, consisting of 120 acres, will be offered for sale on October 25, along with pedigreed and grade Shorthorn cattle, registered Tamworth pigs, as well as horses, sheep, etc. The farm has two houses and two large barns in fine condition. Anyone interested in the purchase of a farm or in the class of stock mentioned above should write to Col. Stuart and get full particulars regarding this offering.

Wanted—At Once

AT HAMILTON, experienced cook-general, also a house-maid. Wages \$30.00 and \$25.00. References required. Apply Box "K" Farmer's Advocate London, Ont.

Harab-Davies Fertilizers

Yield Big Results
Write for booklet.
THE ONTARIO FERTILIZERS, LTD.
WEST TORONTO

OMEGA Milking Machines



Care of Milking Machines

Excerpts from an article in the "Implement News":
"One of the most important needs of users of milking machines is that of quick cleaning. It should be done properly at the proper time. The machines should never be allowed to stand until the casein hardens on the rubber tubes or cups."

Omega has NO RUBBER TUBES

Short, transparent celluloid tubes take the place of long rubber ones. They do not decay or harbor germs, and are easily and quickly cleaned. This is an exclusive OMEGA feature; another is that the pail and milking parts are suspended from the cow's back, and the teat-cups cannot fall to the floor and suck up filth.

WRITE TO-DAY

for illustrated booklet describing the many exclusive features of the OMEGA.

C. RICHARDSON & CO.

St. Mary's, Ontario

SWITCHBOARDS

The latest in design for rural telephone systems. Write for particulars.

Canadian Independent Telephone Co., Limited
261 Adelaide St. West
TORONTO

GLAZED SASH 65c.



BUY NOW AT OLD PRICES

No. 1 clear white pine sash, already glazed. Specially low price for immediate shipment, safely packed. Over sixty sizes and styles, including house, barn and cellar sash, also storm sash.

We sell direct. Builders catalogue free. The Halliday Co., Ltd., Factory Distributors, Hamilton, Can.

METALLIC SKYLIGHTS & VENTILATORS METALLIC ROOFING CO. LIMITED TORONTO, CANADA.

You'll be proud to own and exhibit to your friends the handsome, beautifully-toned well-made **SHERLOCK-MANNING**

20th Century Piano—known as

"Canada's Biggest Piano Value"

Write Dept. 18 for free catalog "T"

THE SHERLOCK-MANNING PIANO CO.
London. (No street address necessary) Canada.

If you want a gilt-edged investment ask for a Mutual Life Endowment.

WANTED

Aisike, Red Clover, White Blossom sweet clover. If you have any of the above seeds to offer, kindly send us samples and we will quote you best price F. O. B. your station.

TODD & COOK
SEEDMERCHANTS, STOUFFVILLE, ONT

Hallam's Fur Window

**Our Only Shop Window
is This Advertisement**

**Our Only Showroom
is Our Fur Style Book**

**Our Only Salesroom
is in Your Home**

This reduces the cost of Hallam Quality Furs to the lowest possible amount, and you reap the benefit.

Just think what you save when buying Hallam Quality Furs by mail—you don't have to pay for high store rent—nor for high priced sales clerks—nor for time spent showing customers goods—nor the usual middlemen's profits.

We buy the raw skins DIRECT FROM THE TRAPPER for cash—make them up into high class fashionable garments, and then sell DIRECT TO YOU by mail.

You can easily see what a big saving all this means—and you receive the benefit of it in better Furs at a lower price.

Also you are sure of satisfaction with Hallam's Quality Furs—there is no smooth tongued salesman to influence you into buying something you don't like, but you can thoroughly examine a Hallam garment in the quiet of your own home, and if you are not satisfied simply send it back at our expense and we will return your money. We do not want you to wear Hallam Furs unless they are entirely satisfactory to you.

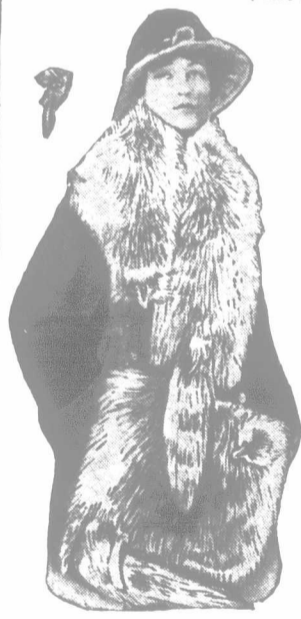
What can be fairer? And what method of shopping can be easier?

Every Hallam Fur Garment is sold under a positive guarantee
"TO SATISFY YOU, OR RETURN YOUR MONEY"
 We have been in the Fur business here for over thirty years.
 This long experience guarantees the high quality of Hallam Furs.
 Our large financial resources guarantee the responsibility of our firm.

1503. BEAUTIFUL MUSKRAT COAT, 50 inches long; selected well matched dark skins, making an exceptionally stylish looking garment; skirt is full and roomy; heavy brown satin lining, silk loops and buttons, deep notch collar and lapels. A splendid coat for motor-ing or driving. Sizes 32 to 42 bust.
 Price delivered to you \$72.50
 1504. HAT to match, as illustrated. Silk lined.
 Price delivered to you \$7.50
 1505. MUFF to match, in pillow shape, roomy and comfortable, satin ends, sateen lined and finished with wrist cord.
 Price delivered to you \$8.00



1684. STYLISH TWO-SKIN CANADIAN WOLF STOLE, made from the finest natural silky silver grey skins. Very wide and roomy over the shoulders. Can be worn across the chest or thrown over the shoulder. Finished with two heads, two tails and paws, lined with durable grey corded silk, chain fastener.
 Price delivered to you \$16.50
 1685. NATURAL GREY CANADIAN WOLF MUFF to match, in large pillow shape. Finished on soft down bed, lined with grey corded silk, silk wrist cord. Trimmed with natural head and tail.
 Price delivered to you \$16.50



1815. HANDSOME CAPE OF GENUINE ERMINE. A new and extremely stylish design. Cape measures 13 inches in depth and is extremely comfortable. The collar and the attractive arrangement of the tails completes an exceedingly beautiful and handsome shoulder piece. Richly lined with white silk. Carefully matched, pure white, full furred skins only are used.
 Price delivered to you \$110.00
 1816. MUFF to match, made in the newest "Bol-ster" shape, a new and novel design. Finished with white silk cuffs and lined with white silk.
 Price delivered to you \$50.00



1680. BLACK WOLF SCARF, made in one skin shaped animal style. A cosy and warm neckpiece. Of good quality fur, jet black and glossy, generous in proportion, lined with corded silk poplin. Fin-ished with head and tail, chain fastener.
 Price delivered to you \$3.95
 1691—MUFF to match, in medium size plain pillow shape, very warm and comfortable, well made, lined with corded silk, soft bed and wrist cord.
 Price delivered to you \$5.00



1526. MINK MARMOT COAT, one of our most attractive designs for this season. The well-known wearing qualities of this rich, dark brown fur make it very desirable. Length 45 inches, with a skirt measurement of 80 inches. Sailor collar, 12 inches in depth. Smart side belts at the waist line and reverse border effect at the bot-tom. Lined with fine quality Venetian and finished with arm shields. Fastens with silk crochet buttons.
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 1527. MUFF to match, in new melon shape, finished with silk cuffs and made on a soft down bed; silk wrist cord.
 Price delivered to you \$10.00



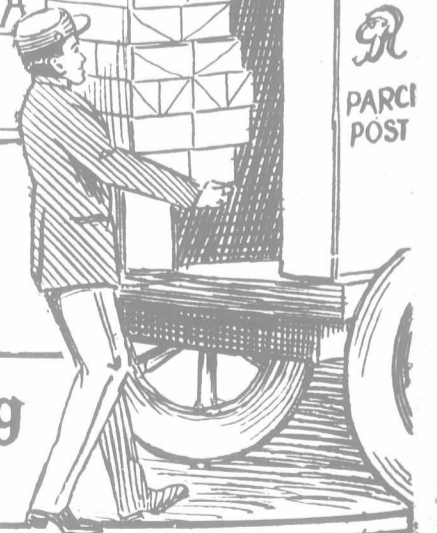
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John Hallam Limited

1006 Hallam Building Toronto.



OCTOBER

EDITOR

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Chop Feeds.

EDITOR "THE FARMER'S ADVOCATE":

The term "chop" or "chop feeds" is a general one used to denote a class of feeds which are essentially oat products. Mill feed, cattle feed, oat feed, mouille chop are common names for these feeds used by the local grist mill, while some of the larger mills put out this product in quantities under specific brand names. Certain of these feeds consist entirely of crushed or ground oats, others consist almost entirely of the by-products of the oat meal mill (including oat hulls) while others contain a certain admixture of corn, barley, etc. They are extremely variable in composition. The Commercial Feeding Stuffs Act, under the administration of the Department of Inland Revenue does not require any registration of chop feeds nor any guaranty as to their percentages of protein, fat and fibre. However, the "Adulteration Act" has established a standard of quality for certain grain products and it states that "Chop Feed is whole grain of one or more kinds, more or less finely ground, and contains not less than ten (10) per cent. protein, not less than two (2) per cent. of fat and not more than ten (10) per cent. of crude fibre." All chop feeds not carrying a guaranty as to nutritive value (minimum percentages of protein and fat and maximum percentage of fibre) ought to conform to this established standard or be considered adulterated.

The correspondence of the Division of Chemistry during the past year has contained many complaints regarding these chop feeds. In certain cases it was stated the feed was refused by all classes of stock and only eaten with repugnance after being mixed with bran or middlings. In many other cases, persistency in feeding the material resulted in the death of swine, calves and poultry, apparently partly from starvation and partly from digestive disorders brought on by the low nutritive value of the feed and its coarse, fibrous nature.

We obtained a few samples of these feeds respecting which complaints had been made, collecting them in Ontario, Quebec and British Columbia, and submitted them to analysis, with the following results:

Analysis of Chop Feeds.

No.	Water	Protein	Fat	Carbohydrates	Fibre	Ash
1	8.74	4.77	1.87	50.97	28.01	5.84
2	9.83	9.69	2.54	63.95	20.70	3.31
3	8.40	9.95	1.59	64.64	12.00	3.42
4	7.08	8.85	2.56	61.19	12.50	7.82
5	6.65	6.58	1.74	55.46	24.42	5.15
6	5.73	6.80	2.28	57.67	22.07	5.45
7	11.33	8.14	2.13	66.85	8.68	2.87

While we do not claim that these analyses are typical of chop feeds as sold generally throughout the Dominion, it is highly significant that not one of the seven examined contained the minimum percentage of protein required by the standard, that they are all exceedingly low in fat and that they with one exception contain an excess of fibre—three of them over 20 per cent. Taken as a series they are of extremely low feeding value and several of them, notably Nos. 1, 5 and 6 are practically worthless.

These feeds ranged in price from \$20 to \$35 per ton. In a few of them there was a sprinkling of corn, but in the majority of them the proportion of meal was very small; they were all coarse and fibrous indicating that they had been largely made from light oats or contained a heavy admixture of oat hulls, mill waste and other worthless offal. Some of them contained a number of weed seeds, fragments of straw, etc. There is no wonder that stock refused them. Indeed it is well nigh impossible to imagine how they could be used profitably, if purchased at any price.

Ground or crushed oats from good quality grain make a nutritious feed—though for young pigs and calves the hulls should be sifted out. While not a high-protein concentrate it possesses many excellent qualities as a basis of the meal portion of the ration. Of all the cereals, oats are the most readily and successfully grown throughout Canada, and there is no reason why the progressive farmer with foresight should not be independent of these purchased chop feeds.—Experimental Farms Note.

**CROWN BRAND
CORN PURE SYRUP**

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In 2, 5, 10 and 20 pound tins—3 lb. Glass Jars.
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EQUAL. Removes the scum—strengthens the muscles.
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 Home from the shows. Review both the Toronto
 and Ottawa reports in the Farmer's Advocate and
 note our winnings. We have young bulls of
 serviceable age that were winners, and others that
 were not exhibited. These are sired by one of our
 two herd sires—Elm Park Pat 8220 and Kinnard
 Lad 7304. We invite correspondence and visitors
 are always welcome.
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 if your teams are equipped with
Ventilator These pads prevent Sore
 Shoulders and cure Gall
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 The best supplementary feed for live
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 Write to-day for lowest prices.
Canada Linseed Oil Mills, Limited
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Alloway Lodge Stock Farm
Angus—Southdowns—Collies
 SHOW FLOCKS
 Rams and ewes. Heifers in calf to Queen's Edward.
 1st Prize, Indiana State Fair.
Robt. McEwen, R.R. 4, London, Ont.

Kennelworth Farm Aberdeen-Angus
 At special prices, six young bulls sired by
 Victor of Glencairn. All are of service-
 able age, and show individuals.
PETER A. THOMSON, Hillsburg, Ont

Beaver Hill Aberdeen-Angus Cows
 with calves at foot and bred again. Bulls of ser-
 viceable age, females all ages; a few Shearling Ox-
 ford Down ram lambs.
Alex. McKinney, R. R. No. 1, Erin, Ont.

Dr. Bell's Veterinary Medical Wonder, 10,000
 \$1.00 bottles FREE to horsemen who give the
 Wonder a trial. Guaranteed for Colic, Inflammation
 of Lungs, Bowels, Kidneys; Fevers and Dis-
 tempers, etc. Send 25c. for mailing, packing, etc.
 Agents wanted. Write address plainly.
Dr. Bell, V. S. Kingston, Ont.

For Sale, PERCHERON STALLION
 Pure bred, registered, sire and dam both imported.
 Color—black. An exceptionally well built and
 promising horse. For particulars as regards price,
 etc., write J. A. H. WIGLE, Kingsville, Ontario

wheat panics. There have been many
 "fitful fevers" of that kind in Britain,
 some caused by previous wars and others
 by bad harvests. Ancient Rome, it may
 be remembered, was in a state of chronic
 riot whenever the wheat ships from
 Sicily or Egypt were delayed, and all
 schools of politicians are agreed that the
 violences of the French revolution in
 1792 were greatly augmented by the wet
 and cold summer which ruined the
 harvest of that year.

The agricultural prosperity of England
 under the Plantagenets was considerable.
 Prices varied greatly from district to
 district owing to the difficulties of trans-
 port; thus in 1459 wheat was 2s. per
 quarter, equal to 20s. of our present
 money, dearer in the Midlands than in
 East Anglia—then as now the granary
 of England. In 1460 the country was
 more than self-supporting, and Parlia-
 ment passed an Act to prevent too much
 wheat going out of the country. Some-
 what later farmers secured an Act to
 prevent excessive imports in years of a
 short home crop. The price fixed both
 for imports and for exports was 6s. 8d.
 per quarter, about equal to 66s. per
 quarter now. When the production was
 large enough to cause the price to fall
 below this level wheat might be sold
 abroad until the level was regained.

In the reign of Henry VIII a new
 situation was created by the immense
 development of sheep farming, the double
 profit on mutton for food and wool for
 clothing making pasture pay better than
 arable land. The proclamation of 1521
 was our first sign of a wheat panic. In
 1549 there was a severer panic; mutton
 was ordered to be sold at a uniform price,
 about 6d. per lb. of our money, and no
 farmer was allowed to keep more than
 2,000 sheep. In 1552 a third scare arose,
 and all speculation in corn for future
 delivery was made penal. The country
 was ceasing to hold its own as a wheat
 grower. Terrible distress prevailed for
 three years at least—1596-8. Wheat
 cost 92s., equal to, perhaps, 184s. now!
 The money equivalent became very
 difficult at this epoch, but it is clear that
 during the next 40 years the masses were
 compelled to give up wheat bread and
 take rye and barley. Things mended
 very slowly, and 200 years' dependence
 of the community on darker bread than
 that made from pure wheat set up that
 prejudice which to this day is felt in the
 refusal of the masses to eat other than
 ultra-white and excessively fine-ground
 flour.

The 21 years' struggle from 1794 to
 1815 forced England to reconstruct her
 agriculture as the first line of national
 defence. Men like the Duke of Bedford,
 Arthur Young and Sinclair have never
 had their full praise for what was done
 to victual the national garrison. But
 wheat panics could not be escaped. The
 bad crop of 1800 sent up wheat to 114s.
 per quarter, equal quite to 181s. now-
 days. The Act of 1800 punishing the
 eating of new bread was grotesque, as the
 bread kept 24 hours was put into a brisk
 oven and made palatable. The restraint on
 the use of it was in the price. A splendid
 crop was reaped in 1801, but even then
 70s. was averaged. Panics occurred in
 1809 (wheat at 97s. 4d.) in 1810 (wheat
 at 106s. 5d.) in 1811 (wheat at 95s. 3d.)
 All these crises happened in the few months
 before a new harvest, and the Government
 with all its energy, never rose to the idea
 of buying the new crop in September,
 and itself seeing to its equal distribution
 over the months between then and a new
 crop.

Eighteen hundred and twelve, which
 crushed Napoleon in Russia by snow and
 ice, tried England as by fire in the summer
 when wheat rose to 180s. per quarter,
 a charge of 2s. for the quarter loaf. Harvest
 was late, and for weeks before a field was
 ripe the stacks were all used up. Danzig
 and other foreign sorts of wheat fought
 their way through the severe Continental
 blockade, and our admirals saved the
 country from a period of absolute bread-
 lessness. But the sufferings of the nation
 need to be recalled, for they were the
 result of our being caught without a
 margin of granary reserves. We held
 the sea with fair ease in the spring, but
 on June 18 the United States declared
 war and preyed on British commerce,

PRODUCTION than by putting
that extra 100 lbs. of finish on
a beef steer.

Finished animals will bring big prices at the
Toronto Fat Stock Show
 Union Stock Yards
December 7th and 8th, 1917
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Established 1875 COME TO HEADQUARTERS Incorporated 1915
F. W. BRODE & CO., MEMPHIS, TENN.
 Branch Office: DALLAS, TEXAS

We are pioneers in this business. COTTON SEED MEAL is our specialty,
 and has been for over 40 years. We devote to it our entire time. We
 can supply you at all times. We select the quality shipped
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Lone Star Brand	Owl Brand	Dove Brand	Jay Brand	Fox Brand Feed Meal
43% Protein	41% Protein	38½% Protein	36% Protein	20% Protein

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PEERLESS PERFECTION
The Fence For Real Protection
 gives life time service. Is made of the
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 Will not snap or break under sudden shocks or quick atmo-
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 hilly and uneven ground, without buckling, snapping or kinking.
 Every joint is locked together with the well-known "Peerless
 Lock." The heavy stay wires we use prevent sagging and
 require only about half as many posts as other fences.
 Send for catalog. It also describes our farm gates, poultry
 fencing and ornamental fencing. Agents nearly everywhere.
 Agents wanted in unassigned territory.
THE BANWELL-HOXIE WIRE FENCE CO., Ltd.
 Winnipeg, Manitoba Hamilton, Ontario

OUR LATEST IMPORTATION OF CLYDESDALES

arrived at our barns late in November. A number of them since have been prominent winners at both
 Guelph and Ottawa. But we have others (both stallions and mares) that were never out. The majority
 of the stallions weigh around the ton, and better quality and breeding were never in the stables.
 Come and see them. We like to show them. **SMITH & RICHARDSON, COLUMBUS, ONT.**

IRVINDALE SHORTHORNS
 Herd established Fifty Years. Senior Sire, Gainford Select. Junior sire, Marquis Supreme. We
 have at present three sons of Gainford Select that are ready for immediate service; two that will be
 ready soon and others coming on. The best place in Canada to get a grandson of Gainford Marquis.
 We also have several cheaper bulls, one good Right Sort heifer and are offering Gainford Select. See
 him or any of the others if interested. **JNO. WATT & SON, ELORA, ONTARIO**

Robert Miller, Stouffville, Ont.

still has a few Shorthorn bulls fit for service, and some females that are as good as can be found for
 the man that wants to start right in Scotch Shorthorns. They will be sold at a low price, considering
 the quality, and the freight will be paid.
 Write for anything in Shorthorns or Shropshires. One hour from Toronto.

The Hawthorne Shorthorns and Leicesters

Heifers and cows with calves, and a few bulls. 1 extra good shearing ram, and ram lambs, and several
 real good grade ewes. Yorkshire sows. **R. R. 4, Peterborough, Ont.**

NICHOLSON'S SHORTHORNS

Herd headed by "Best Boy" =8552 =, and "Browndale Winner" =106217 =. Bulls and females for
 sale. Visitors always welcome to this herd of long-established reputation.
R. & S. NICHOLSON, PARKHILL, R. NO. 2, ONTARIO.

FLETCHER SHORTHORNS
 Our herd of Scotch Shorthorns represents Orange Blossoms, Kiblean Beauties, Matchless Myrae
 Missies, Clementinas, etc., and is headed by the Watt-Stamford bull, Victor Stamford =95959 =, a
 Toronto winner. Present offering—one roan Orange Blossom bull, 12 months old (a show animal)
 also younger bulls and several choice cows and heifers.
Geo. D. Fletcher, Erin, Ont., R. R. 1, Erin Sta., C. P. R., L.-D. Phone.

MEADOW LAWN SHORTHORNS

We are offering 3 extra choice Scotch bulls, belonging to the Claret and Roan Lady families. Low set,
 thick, fleshy fellows by that great sire, Escana Ringleader, first-prize bull at Toronto and London
 Fairs. Write your wants or come and see them. **F. W. EWING, R. R. No. 1, Elora, Ont.**

Welland District Shorthorn Breeders' Club

are still offering young bulls of serviceable age, and a few breeding females.
Chas. Gainer, Secretary, Box 607, Welland, Ont. A. E. Howell, President, Fenwick, Ont.

POOR COPY

of the sea, but in 1850 the country was scared over a wheat average of 74s. 8d., with bread at 9d. to 10d. per quarter loaf. In 1867 another dear wheat year occurred, 64s. 5d. being averaged, and the loaf reaching 8d. and 8½d. But this was a purely home crisis; 1865, 1866 and 1867 had all of them under-average harvests, and the foreign producers did not increase their wheat areas fast enough to meet a demand which they naturally could not foresee would be so protracted. Between November, 1883 and May, 1891, wheat was uniformly below 40s. There was in April and May, 1898, the Leiter movement in the United States, and the British buyer, being once again caught napping, saw wheat rise to 46s. 6d. for home-grown and to 50s. for American. At that date, however, Argentina was not the power in the wheat trade which she now is.

ALBION.

Wheat Receipts Light at Terminal Markets.

Under date of September 20 the Canada Atlantic Grain Co., Ltd., gives the following information relative to the wheat situation and the movement of oats and barley:

"Wheat.—As yet the Allies have not decided to take hold of our choice milling wheat crop at the fixed price of \$2.21 basis No. 1 Northern. Financial arrangements must be made to handle the crop and pending the completion of these, there are no buyers for No. 1, No. 2 and No. 3 Northern wheat at the present time. Canadian millers' wants have been temporarily filled. Within a short time, all the details for financing the movement of wheat by the Allies will have been settled, and conditions will become normal. The anxiety on the part of the holders of the wheat in store now, awaiting buyers, is unwarranted. Food must be secured to continue the War and the Allies must cover their requirements with Canadian wheat, since the United States Wheat Corporation has not been able to fill domestic orders in the United States. Just as quickly as the machinery is in working order, every bushel that can be spared from here will be imported by Italy, France and Great Britain. Wheat receipts at the terminal markets in the United States are still light and below daily consumption requirements. Domestic flour demand on the other hand has been excellent and Minneapolis mills last week ground 366,965 barrels of flour compared with 359,000 barrels a year ago.

The American farmer is nobly responding to the call for an increased acreage, especially with the incentive of the guaranteed price of \$2 per bushel by the United States Government. Winter wheat acreage this year is estimated at 119 per cent. of the 1916 acreage in Ohio, 152 per cent. in Illinois, 148 per cent. in Missouri, 111 per cent. in Iowa and Kansas and 90 per cent. in Nebraska.

"Oats have fluctuated within a comparatively narrow range and the market acted largely in sympathy with the price movement in Chicago. Heavy export demand there, coupled with the lack of selling pressure by farmers, held Chicago September oats very firm. Heavy sales of American barley have been made for export, as evidenced by clearances last week from Atlantic ports of 1,126,000 bushels against 638,000 bushels last year. Estimated barley crop in Western Canada this year is 32,000,000 bushels the same as in 1916."

Pony Stud Book Ready.

A nicely printed and well-compiled number of the Canadian Pony Stud Book is now ready for distribution. Shetland, Welsh, and Polo Ponies are included. This is volume 1 and no one interested in ponies should miss the initial number.

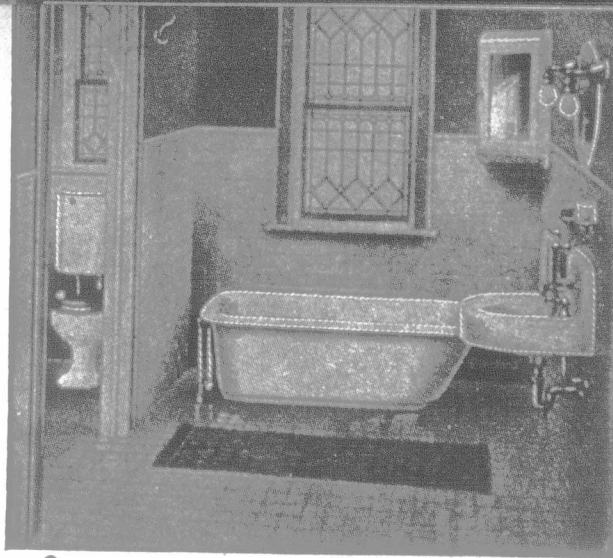
Considerable interest has been aroused by the discovery of telegrams found in the secret archives of ex-Czar Nicholas, revealing secret correspondence with the Kaiser, which indicates that the latter had the war definitely in mind for some time before its outbreak, and was seeking to separate Russia from the Allies.

Be in the van of progress by having not only the telephone and rural mail, but also running hot and cold water in the bathroom and kitchen. Have water in the barn and for the lawn and garden. In case of fire you have an efficient fire-fighting plant, with lots of pressure for real work. This is all made easily possible if you own an

Empire Water System

Many country homes are enjoying the comfort and protection afforded by Empire Systems. Why not modernize YOUR home when it is so easily done and costs so little? It will lessen the household burdens and enhance the value of your property as well.

Send for our Information Blank and Catalogue to-day. Fill in the blank, return it to us, and we will suggest a system suited to your needs, and give you an estimate of its cost, free of charge.



System Includes the Following :

White enamel bath tub, closet with tank, lavatory with fittings, hot water boiler for kitchen range, kitchen sink, water supply system with pneumatic storage tank, and all piping and fixtures necessary.

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New COAL OIL Light

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Don't ask you to pay us a cent until you have used this wonderful modern white light in your own home ten days, then you may return it at our expense if not perfectly satisfied. We want to prove to you that it makes an ordinary oil lamp look like a candle; beats electric, gasoline or acetylene. Passed by Insurance Underwriters. Children handle easily. Tests by Government and 35 leading Universities show that the new ALADDIN BURNS 70 HOURS ON ONE GALLON common coal oil, no odor, smoke or noise, simple, clean, won't explode. Over three million people already enjoying this powerful, white, steady light, nearest to sunlight. Won Gold Medal at Panama Exposition. Greatest invention of the age. Guaranteed.

\$1000 Reward will be given to the person who shows us an oil lamp equal to the new Aladdin in every way (details of offer given in our circular). We want one user in each locality to whom we can refer customers. To that person we will give a special introductory offer to make, under which one lamp is given free. Write quick for our 10-Day Free Trial Offer and learn how to get one free, all charges prepaid.

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Largest Coal Oil Mantle Lamp House in the World

SPRING VALLEY SHORTHORNS

Herd headed by the two great breeding bulls, Newton Ringleader (imp.) 73783, and Nonpareil Ramsden 83422. Can supply a few of either sex.

KYLE BROS. DRUMBO, ONT. PHONE AND TELEGRAPH VIA AYR

Glengow Shorthorns

We have a choice offering in young bulls, fit for service. They are all of pure Scotch breeding, and are thick, mellow fellows, bred in the purple.

WM. SMITH, Columbus, Ontario. Myrtle, C.P.R.; Brooklin, G.T.R.; Oshawa, C.N.R.

SALEM SHORTHORNS

Herd headed by Gainford Marquis, (imp.), undefeated in England and Canada. Sire of the winning group at Canadian National, 1914, 1915, 1916. Can supply cattle, both sexes, at all times.

J. A. WATT, ELORA, ONTARIO

OAKLAND---50 SHORTHORNS

A herd of feeders, breeders and milkers that give satisfaction wherever they go. One bull for sale, 12 months, white, extra milk strain. Also females, any age. Priced so you can buy. One of the finest bulls in Ontario heads this herd.

JNO. ELDER & SON, Hensall, Ontario

SPRUCE GLEN SHORTHORNS

of such popular strains as Minas, Fames, Miss Ramsdens, Florences, Emilys, etc.

Have still a few young bulls—thick, mellow fellows, fit for service.

JAMES McPHERSON & SONS DUNDALK, ONTARIO

Shorthorn Cattle and Lincoln Sheep—Young cows and heifers of the best Scotch families. Sire in service, Sittyton's Selection =86508=. The winning pen of long-wool lambs, all breeds competing at 1916 Guelph Winter Fair, came from this flock. Imported and home-bred rams and ewes for sale. New importation home from quarantine in September.

R. S. ROBSON & SON, Denfield, Ont.

SHORTHORNS

Imported and Canadian bred. A. G. FARROW, Oakville, Ont.

Maple Shade Farm—SHORTHORNS

An importation consisting of forty-three head now in quarantine will be home about September 30th. Myrtle, C.P.R., Brooklin, G.T.R., Brooklin, C.N.R. Will. A. Dryden, Brooklin, Ontario Co.

IMPORTED SHORTHORNS

Thirty-five imported cows and heifers, forward in calf to service in Scotland; also five imported bulls. Our 1916 importations are all choicely bred. Have also home-bred bulls and females. Farm half mile from Burlington Junction. Write or call and see us. J. A. & H. M. Pettitt, Freeman, Ont.

Pure Cottonseed Meal

"Dixie Brand".....41% protein, fat 5.50%
 "Forfat Brand".....38.55% protein, fat 5.00%
 "Danialh Brand".....36% protein, fat 5.00%
 "Creamo Brand".....20 to 25% protein, fat 5.00%

Mills conveniently located in every cotton-growing State in the South. Prices on application in car lots or less.

Fred. Smith, 32 and 34 Front St. W., Toronto

Mardella Shorthorns

Dual-purpose bulls, 20 young cows and heifers—bred, some calves by side. Size, type, quality; some full of Scotch. The great massive Duke—dam gave 13,599 lbs. milk, 474 lbs. butter-fat—at the head.

Thomas Graham, Port Perry, R. 3, Ont.

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Shorthorns and Leicesters

Sire in service, Roan Chief Imp. 60865. Young bulls from 10 to 14 months, and a choice lot of rams and ewes. All by imported sires.

W. A. Douglas, Caledonia, Ontario.

A GOOD

SHORTHORN BULL FOR SALE

A rare opportunity to secure the high-class bull, Sea King =84762=, Mayflower bred son of the great Trout Creek Wonder. Red roan, 5 years old. For particulars write:

W. W. SCOTT, R. No. 2, HIGHGATE, ONT.

Brownlee Shorthorns. Offers a choice lot of young bulls, ranging in ages up to nine months and sired by the Nonpareil bull, Royal Saxon. See these before buying elsewhere. Could also spare a few females. Douglas Brown, Bright, Ont., R. R. 3, Ayr Station, C. P. R.

PLASTER HILL SHORTHORNS

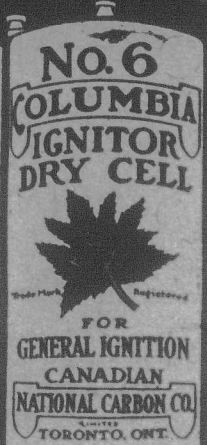
Two 2-year-old bulls, one yearling bull, one bull calf. Heavy milking families.

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As with your motor-boat, so with your tractor, auto or stationary engine — for dependability use Columbias.

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Fahnestock spring-clip binding posts, no extra charge.



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

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Most complete veterinary book ever printed to be given away. Durable bound, indexed and illustrated. Write us for a free copy.
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Fattening Mash	Vim or Oat Feed, etc.

Write anything in the feed line, we have it. In car lots or less. Write or phone for prices.

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Dovercourt Road, Toronto, Ont.

The Farm Management Survey.

Quite frequently, during the past few months, articles have appeared in both the farm and daily press, regarding the advisability of conducting agricultural surveys throughout the country, for the purpose of determining actual conditions in the farming sections. The advocates of such a scheme, and, in fact, all persons interested in agriculture, may be interested in knowing that work along this line has been started already in Ontario. The movement has been under consideration for the past two or three years, but no appropriation of funds was made until May, 1917. The work is controlled by the Farm Department of the Ontario Agricultural College, A. Leitch being the man directly in charge. Actual field operations are to be commenced on October 1, in Caledon Township, Peel County, which area is considered typical of the general mixed farming sections of the Province.

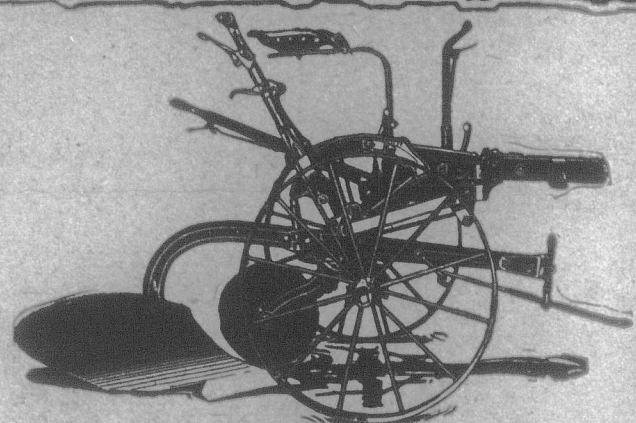
From one hundred and fifty to two hundred farmers in the district will be visited, and, with their co-operation, a complete record of the business of each farm, for the twelve months preceding October 1917, will be taken. The question blanks to be used by the field men deal with every detail of the farm business — total acreage owned or rented by the operator, acreage under each crop grown, yields per acre, amounts of cash crops sold, all live stock on hand at the beginning and end of the year, together with purchases and sales during the year, current expenses during the year, inventory of all farm equipment and real estate. Besides this, questions dealing with the various phases of the management of the farm business are included. None of the questions are of such a nature that the men interviewed are likely to decline an answer. No farm will be eliminated because it is either particularly poor or particularly good. All kinds are to be included.

From the data so gathered an estimate may be formed of the average labor income of the farmer under present circumstances. Then the factors which have a direct bearing upon the amount of labor income may be determined. With a hundred and fifty or more farms under consideration the factor of the individuality of the operator will be largely eliminated and the farms will divide into classes, determined by outside conditions. For example, it may be shown which is proving more generally profitable, the small farm with a relatively larger amount of labor, or the larger farm with a relatively smaller amount of labor. The influence of capitalization may be determined — the relationship to labor income of over-capitalization and under-capitalization. The effects of pure-bred stock, the growing of suitable varieties of crops, the practicing of a suitable rotation, and numerous other minor factors may be worked out. As no work of this kind has yet been done in Canada, it is impossible to give other than a very brief outline of what the data may show. There are, perhaps, some who might say that such information should be obtainable from experimental or demonstration farms now in operation. But, when a farm can be placed in either of these classes it ceases to typify general farm conditions, and hence data from such a source could not be considered as representative of any area in the Province.

Gossip.

The National Dairy Show.

Everything possible is being done to make the National Dairy Show, to be held in Columbus, Ohio, October 18-27, the best ever held. Not only will the best dairy herds of the country be on exhibit but visitors will have an opportunity of seeing every known device for the handling of milk and milk products. Conventions and conferences will be held daily when dairy subjects will be discussed. There will be something of vital interest to dairymen going on during the entire Show. Plan to attend.



Hamilton Plows for Long, Hard Service

IT takes a real plow to make good with the plowing experts of Eastern Canada. Therefore, we take pride in the fact that the Hamilton No. 126 sulky meets with their approval. Partly because it is adjustable to all conditions, partly because it is easy to operate, but mostly because it is built to do first-class plowing for many years, this sulky has made good.

Note the handy pole shift. With it you can instantly change the landing of the beam, straighten crooked furrows, adapt the plow to side hill plowing and to the turning of short corners.

The Hamilton 126 is a two-wheel sulky with a horse lift — a simple type that is remarkably easy to operate. The horses do practically all the work, yet the draft of the plow is so light that they do a full day's work with it.

The Hamilton line also includes walking gangs, two-way plows, and a choice assortment of walking plows. All are made with the thoroughness you will find in the 126 sulky. Note the new spring beams and long handles of the walking plows. Write us for Hamilton plow folders.

International Harvester Company of Canada, Limited

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WEST — Brandon, Man., Calgary, Alta., Edmonton, Alta., Estevan, Sask., Lethbridge, Alta., N. Battleford, Sask., Regina, Sask., Saskatoon, Sask., Winnipeg, Man., Yorkton, Sask.
EAST — Hamilton, Ont., London, Ont., Montreal, Que., Ottawa, Ont., Quebec, Que., St. John, N. B.

ROYCROFT FARM HOLSTEIN-FRIESIANS

The home of Het Loo Pietertje, the world's record junior two-year-old, and Mildred Pietertje Abbecker, the world's milk record four-year-old. Records were both made on the farm this year and we have young bulls of the same breeding. Get your next herd sire from a herd that is best by test. Regarding individuality — pay "Roycroft" a visit and see for yourself. Take Yonge Street cars from North Toronto.

W. L. SHAW, Newmarket, Ont.

Hospital for Insane--Hamilton, Ont.

Present offerings are 4 grandsons of Dutchland Colantha Sir Mona, and high-testing, large-producing R. of P. dams of Korndyke and Aaggie DeKok breeding. Born during April and May, 1917. Apply to Superintendent.

HIGHLAND LAKE FARMS

SOME OF THE BULLS WE HAVE FOR SALE AT ATTRACTIVE PRICES

1. Born May, 1917, two nearest dams average	35.62 lbs.
2. Born March, 1917, two nearest dams average	34.16 lbs.
3. Born March, 1917, two nearest dams average (one at 3 yrs.)	34.23 lbs.
4. Born March, 1917, two nearest dams average (one at jr. two yrs)	33.12 lbs.

These are sons of Avondale Pontiac Echo, our herd sire (under lease) a son of May Echo Sylvia, the world's record cow. Only one other 41-lb. bull in Canada. Send for extended pedigrees and prices on these and others, a few of serviceable age, one from a 111-lb. cow. We guarantee satisfaction. Twenty-five females for sale.

R. W. E. BURNABY (Farm at Stop 55, Yonge St. Radial) JEFFERSON, ONT.

SUMMER HILL HOLSTEINS

The only herd in America that has two stock bulls that the dam of each has milked over 116 lbs. a day, and their average butter records are over 35 lbs. a week. We have 50 heifers and young bulls to offer, by these sires, and out of dams just as well bred. We invite personal inspection.

D. C. FLATT & SON, - R. R. 2, Hamilton, Ont. - Phone 7165

CLOVERLEA HOLSTEIN-FRIESIANS

Stock for sale, all ages, from choice, high-testing dams — 75 head to choose from. Our special offering is a few choice heifers, due to freshen in September or October. Personal inspection is invited.

GRIESBACH BROS. L-D. Phone COLLINGWOOD, ONT.

SILVER STREAM HOLSTEINS

Just now we are offering our two junior herd bulls, aged 2 and 3 yrs. Individually as good as their breeding; sired by King Lyons Hengerveld and King Lyons Colantha. Personal inspection is invited.

J. Mogk & Son, R. R. No. 1, Tavistock, Ont.

KING SEGIS WALKER'S

Oldest daughter with first calf made 456 lbs. milk and 24 lbs. butter; with her second calf, 560 lbs. milk and 29 1/2 lbs. butter. His first granddaughter, through his son, at 2 yrs. 2 months, made 440 lbs. milk and 23 1/2 lbs. butter. Young stock for sale.

A. A. FAREWELL, OSHAWA, ONTARIO.

EVERGREEN STOCK FARM - Registered Holsteins

Just now we are offering a very choice young bull, five months old, whose five nearest dams average over 30 lbs. of butter in seven days and 100 lbs. milk in one day. Also another bull calf whose dam was the top-price cow in the Woodstock Sale. Bell phone.

MAPLE LEAF STOCK FARM HOLSTEINS

Fine quality, typey, heavy-producing Holsteins — forty head to choose from. The females are sired by Idaline's Paul Vecman and King Segis Pietertje, and are in calf to FINDERNE King May Payne. Two bull calves, about ready for service, sired by the latter bull and out of heavy-producing cows, for immediate sale. Females in milk have made high records and sires used have the backing and are proving good. Correspondence solicited, visitors welcome. H. C. HOLBY, GLANWORTH, ONT.

Questions and Answers. Miscellaneous.

Farming on Shares.

What would be a fair arrangement to make when renting a farm to be worked on shares. The farm is fully equipped with stock and implements and the barn is filled with this year's crop. A. S.

Ans.—We believe it would be more satisfactory for the present owner to dispose of this year's crop before making arrangements for the following year. It is rather difficult to put a value on the feed in the barn. The class of farming engaged in will make a slight difference in the arrangement. More labor is required with dairying, for instance, than with beef raising. In working farms on shares the apportionment of expenses borne and proceeds received by the tenant commonly runs around forty per cent. According to this, the owner, besides furnishing the land, buildings, live stock and implements pays sixty per cent. of the taxes, repairs, seed, etc., and receives sixty per cent. of the proceeds. The tenant does all the work and bears forty per cent. of the expenses, for which he receives forty per cent. of the proceeds. In letting the farm on shares everything should be clearly stipulated in the agreement in order to avoid difficulty when settling up.

Worms on Turnips — Seeding for Pasture.

1. I have a patch of turnips that have been badly eaten by a small worm, a specimen of which I am enclosing. What is the best method of destroying same?

2. I am remodelling my stables, putting in cement floors and mangers; where is the best place to locate the individual water buckets so that they will be convenient but still out of the way in feeding?

3. I purpose plowing up an old pasture and reseeding it. Would Kentucky blue grass be all right on soil that is clay loam? H. G.

Ans.—1. The specimen received at this office was in rather a dilapidated condition but we believe the worms are what are known as the fall army worm, which sometimes appear in large numbers and cause destruction of the foliage. The dry spell may have something to do with them attacking the turnip crop. It is very seldom that these worms appear in sufficient numbers to do much damage. As they eat the leaves, it will be necessary to apply some form of poison as Paris green or arsenate of lead. However, it will be found difficult to make anything stick to the smooth surface of the turnip leaf. We doubt the advisability of applying a poison to a crop that is nearing maturity and which is to be fed to stock. The poison would run down the stalks of the turnips and might lodge there in sufficient quantities to cause loss. If using poison material it is necessary to mix it with a sticker in order that it may be effective on turnips. The sticker is made as follows: Boil together 2 pounds of resin, and one pound of sal soda in one gallon of water until they take on a clear brown color. Add this to 40 gallons of the poison solution. It will require about 1 pound of Paris green or 3 pounds of arsenate of lead to the 40 gallons.

2. Water buckets are frequently placed in the partition between two animals, about the centre of the manger. This makes them fairly handy for the cattle and if they are placed a couple of feet above the bottom of the manger they can be kept fairly free from feed. Some have used cement for building their partitions between the mangers and have made a cement water box at the top with a supply pipe imbedded in the cement. No matter where the water box is placed there is bound to be more or less dirt get into it.

3. Kentucky blue grass would furnish very good pasture. If a little orchard grass were sown with it, early and late feed would be supplied. We believe a mixture of grasses would prove more satisfactory than sowing one individual grass. Timothy, meadow fescue, alsike, and even red clover can advantageously be sown along with the blue grass. The clover will kill out the second year, but then it will furnish feed the first year while the other grasses are becoming established.

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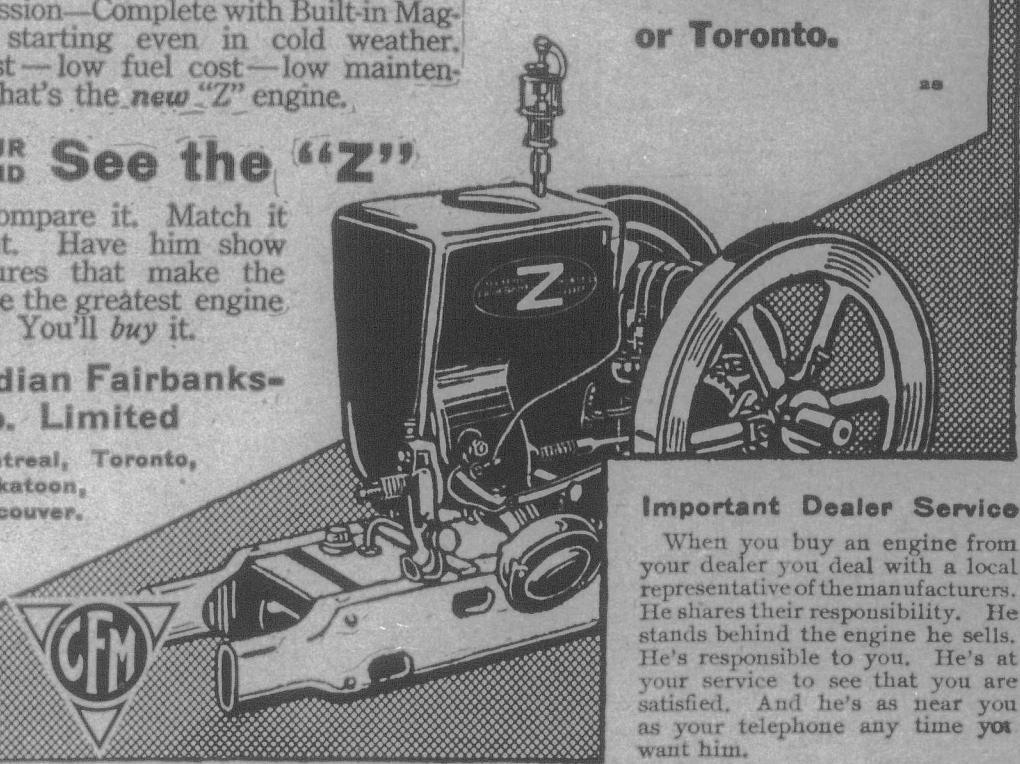
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SOLD

"King Johanna Rauwerd", the son of our 25,000-lb. cow, "Calamity Johanna Nig", (9076) advertised last week, goes to head the herd of W. B. Poole, Ingersoll, Ont.. We have a half brother of this bull, fit for service, that we are offering at a very reasonable price. Write us for breeding, etc. JOSEPH O'REILLY, R. R. No. 9, PETERBORO, ONT.

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A few choice yearling bulls and heifers. Fine individuals, beautifully marked and highly strained in the blood of the world's record cattle. 1 Clydesdale stallion, "Coming Star". Fine type, excellent breeding. Rising 5 yrs. Write for particulars.

JOS. KILGOUR, EGLINTON. Toronto Phones: Bd. 184, Adel. 3900.

DUMFRIES FARM HOLSTEINS

175 head to choose from. Special offering—bulls from one month to one year old. Grandsons of Prince Aggie Mechthilde. Visitors always welcome. S. G. & ERLE KITCHEN ST. GEORGE, ONT.

When writing to our advertisers will you kindly mention The Farmer's Advocate

Manor Farm Holsteins

Those wishing a young sire from high-record dams and sired by King Segis Pontiac Posch will do well to write for pedigree and prices before buying elsewhere.

SATISFACTION GUARANTEED Gordon S. Gooderham CLARKSON, ONTARIO

Record Holsteins

We have the only two sons in Canada of the 46-lb. bull, Ormsby Jane King, only mature son of the world's most famous cow. One of them for sale. Also a 30-lb. calf, whose dam and 2 great grandams average 38.4 lbs. butter in 7 days. Eleven bull calves of lesser note and females all ages. R. M. HOLTBY R. 4, Port Perry, Ont.

RIDGEDALE HOLSTEINS offers three young bulls (one ready for service) at special prices. One is by Pontiac Hengerveld Pieterje, and the others are by King Segis Pontiac Duplicate. Can also supply a few females. R. W. Walker & Son, Port Perry, R. R. 4, Manchester, G.T.R., Myrtle, C.P.R.

Willowlee Holsteins

A few bulls left, 4 months old; dams, 65 lbs. of milk a day. \$50.00, delivered. A. MIGHT, R. R. No. 6, Brampton, Ontar

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Hallam's Trappers' Guide—96 pages; illustrated; English or French; tells how and where to trap; what bait and traps to use; is full of useful information.

Hallam's Trappers' Supply Catalog—36 pages; illustrated; rifles, traps, animal bait, headlamps, fish nets, trappers' and sportsmen's supplies, at low prices.

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HOOD FARM, LOWELL, MASS.

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Young bulls for sale (out of R.O.P. dams) from one to fifteen months old; tracing closely to the world's champions, Garclough May Mischief and Jean Armour.

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SUNNYSIDE AYRSHIRES

We have at present the strongest lot of young bulls we ever offered—one by Hobland Masterpiece, one by Sunnyside Matchless, and the others by our present herd sire, Sunnyside Masterpiece.

Jno. W. Logan, Howick Station, Que.

D. M. WATT

Ontario Tobacco Crop Report for 1917.

EDITOR "THE FARMER'S ADVOCATE":

After several weeks of inspection work in Ontario every tobacco growing section has been covered in an effort to make the Department of as much use as possible to the tobacco growers. In this work the condition of the crop and the acreage have been very closely ascertained. Last year the spring was late and wet while this year we experienced a colder and later spring. For this reason the crop had a late start. There was a great deal of trouble with tobacco seed beds, and many failures were experienced. Taken as a whole the semi-hot seed bed gave the best results. There was a rather severe outbreak of root rot in many sections this year, and shortly after transplanting most of Essex County experienced a rather long drought. The drought was later broken by rains that came in time to pull up the total production somewhat. Labor has been very hard to obtain in growing tobacco this year. No doubt labor has limited the acreage and consequently the production more than any other factor, this year.

Situation by Counties.

Essex County—This year there are about 1,030 acres of flue or bright tobacco grown. This is practically the same acreage as last year. Harvest is progressing rapidly. The leaf is curing pretty fair under the circumstances. The yield as a whole will be approximately equal to last year which was about 750 pounds per acre. This will give approximately 800,000 pounds of bright tobacco for 1917.

The White Burley acreage has shown a slight increase in some vicinities and a slight decrease in others over last year. Taken as a whole the acreage is about the same as last year. There are about 500 acres of White Burley in the county, not including Pelee Island, that will produce about 650,000 pounds of tobacco. The Connecticut Havana, Comstock, Zimmer Spanish, and Seed Leaf have shown a slight increase over last year, there being about 250 acres devoted to these varieties. The yield will be fair. A much better yield would have been obtained if these varieties had been planted in rows two and one-half to three feet apart and eighteen inches between plants in the row. This is the proper distance for these types of tobacco.

Pelee Island—Cutting or Harvesting is beginning. The crop promises to be good in quality. The acreage is practically the same as last year, but the yield will be better. There are about 500 acres of tobacco on the Island, all devoted to White Burley. The production will be about 650,000 pounds.

Kent County—This county shows a slight decrease in acreage. 570 acres are devoted to tobacco, 100 acres of which is devoted to Zimmer Spanish and other cigar tobaccos, the remainder is devoted to White Burley. The decrease in acreage has come mainly on the heavier lands where the last two late springs have made it very difficult to get the tobacco in the field at the proper time. The production for the county will be approximately 700,000 pounds including all varieties.

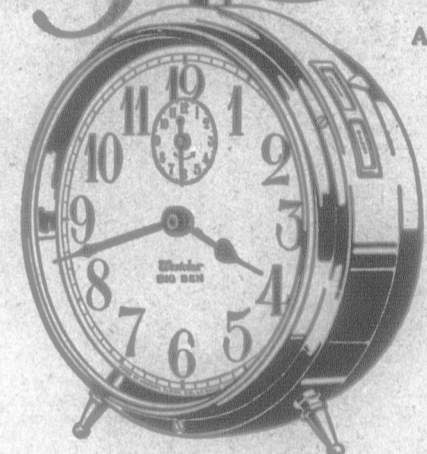
Prince Edward County—About 8 acres are devoted to White Burley, and 12 acres to Maryland tobacco. Both crops are very good in the county. The total production will be about 30,000 pounds of tobacco.

Welland County—Six acres of White Burley that will produce 9,000 pounds in being grown this year. Last year this county produced one of the finest quality crops of tobacco in Canada. There is quite a large area of excellent tobacco soil in this county around Font-hill that would give good returns per acre.

Elgin County—About 8 acres of White Burley is being grown this year that will average 1,200 pounds to the acre. There is a total of 2,884 acres with estimated yield of 3,111,600 pounds as compared with 3,162,000 pounds in 1916.

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A Westclox Alarm



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The foundation of this herd is made up of very high-class cows, imported from the Island of Jersey, most of them in the Record of Performance, and while we have, at all times, a few mature cows for sale, we make a specialty of in-calf heifers and young bulls. Write us your wants, or better still, come and see the herd. We work our show cows and show our work cows.

Young BRAMPTON JERSEYS Bulls

For the next fortnight we are making a special offering on young bulls, bred from the highest producing families ever introduced into Canada. Brampton Jerseys and their descendants hold all Jersey R.O.P. records, save one. Females, all ages, also for sale. **B. H. BULL & SON, BRAMPTON, ONTARIO**

THE DON JERSEY HERD—

OFFERS:—Several young bulls, all of serviceable age, and all from R.O.P. dams. These are priced right. Interested parties should write or see these at once. We also have females of breeding age.

D. Duncan & Son, Todmorden P.O., Duncan Station, C.N.O.

GLADDEN HILL AYRSHIRES

We are offering some choice young bulls, nine months of age from splendid cows and sired by Fairvue Milkman. A few females also for sale.

LAURIE BROS., AGINCOURT, ONTARIO

Headed by Burnside Lucky Master Swell, a combination of blood so hard to equal, being of the

POOR COPY

SYDNEY BASIC SLAG

Pay Attention to This Warning!

The General Freight Agent of the Canadian Government Railways, Moncton, N.B., writes under date 15th June, 1917, as follows:

"I wish to remind you that there is no very good prospects of any marked change in conditions next winter and spring. The same cause which prevented us from furnishing cars in sufficient quantities when required and giving the necessary guarantee of despatch will doubtless be encountered again this coming winter, and the railways of this country will continue to be heavily taxed to handle men and supplies. It seems to me that in your own interests as well as that of agriculturists, the situation should be faced and an effort made to get the bulk of your shipments off before the close of 1917. It is up to the farmers of the country to help out by taking delivery, so far as possible, of their fertilizers as these are obtainable and as cars are procurable, and not to expect the railways to drop everything else in an effort to get fertilizers carried at a season of the year when conditions of transportation are at their worst."

Ontario farmers will remember that we were unable to deliver Basic Slag last spring for want of transportation, and that all our orders had to be cancelled. We respectfully ask them, therefore, to help out by placing their orders for their spring requirements with our agents right away, and taking delivery as the goods arrive in November and December.

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Sydney, Nova Scotia

Our Breeding and Quality



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Summerhill Stock Farm

For size, quality and breeding, our Oxfords cannot be excelled. Our flock has won the Chicago championship yearly, since 1910 and the championships at all the leading fairs of Canada since the flock was established, in 1879. We have for sale 20 yearling rams and 30 ram lambs (flock headers), fifty yearling ewes and fifty ewe lambs all sired by the best rams obtainable. Write and let us know what your requirements are. Prices reasonable.

Peter Arkell & Sons, R.R. No. 1, Teeswater, Ont.
H. C. Arkell, W. J. Arkell, F. S. Arkell.

**RAW FURS-HIDES
WOOL & C.**
SEND US YOUR SHIPMENTS—TO RECEIVE HIGHEST MARKET PRICES.
JOHN HALLAM, Limited
9 Hallam Building TORONTO

will be able to secure only one-half of this amount. In the United States the tobacco crop is selling stronger and in greater demand than it was last fall, and this is true for all types of tobacco.

H. A. FREEMAN, Tobacco Inspector.
Ottawa.

Gossip.

The attention of our readers is drawn to the advertisement of The Toronto Fat Stock Show contained in this issue. The last hundred pounds of finish on a beef steer is the most economical gain, and makes a steer grade prime and get the top of the market. Buyers come from all parts of the country and pay highest prices for the good, well-finished animals at the auction sale of the Toronto Fat Stock Show.

Balmedie Aberdeen-Angus.

Of the five young Aberdeen-Angus bulls advertised elsewhere in this issue, by Thos. Broadfoot, Balmedie Farm, Fergus, Ont., three are now ready for service. Taken as a whole they are really a promising lot. Four are got by a good breeding Pride-bred son of Balmedie Proud Boy, which has sired many of the best things in Canada today, and these when seen recently by a representative of this paper were each good enough to go to almost any good herd. The fifth bull is not Mr. Broadfoot's own breeding and not quite so strong either, but he has plenty of size and will improve with fitting. All of the home-bred stuff are made up principally of Pride, Mayflower and Keepsake families and identical with those that make up Mr. Broadfoot's 1915 show herd when it was decidedly his year for

LARKIN FARMS, Queenston, Ont.

OFFERS EXCEPTIONAL VALUES IN

Aberdeen-Angus Cattle

Shropshire and Southdown Sheep

Visitors welcome. Correspondence solicited.

Leicesters, Shorthorn Cattle,
and Berkshire Pigs. Ram lambs and ewes at reasonable prices. Two bull calves, 5 and 6 months. A few Berkshire sows.
Dunnet Bros. Lythmore, Ont.

REG. LINCOLN SHEEP
Rams and Ewes
C. A. POWELL, ETRICK, R. R. No. 1, ONT.
Lot 14, Con. 8, London Township.
4 miles from London.

Kelsey's Shropshires.

This flock won both flock prizes at Toronto and all flock prizes but one at London this year in strong competition. Specially fitted yearling rams and a few ram and ewe lambs for immediate sale.
John R. Kelsey, Woodville, Ont.

For sale—Fifty pure Shropshire ram and ewe lambs from \$16 to \$20, each; also young, breeding ewes, of fine quality and pure Jersey and Ayrshire cattle. H. E. Williams, Sunnylea Farm Knowlton, Que.

FARNHAM OXFORD DOWNS

Flock established from the best flocks in England. Our initial importation was among the first in 1881. Having quit the show-ring, we now make a specialty of breeding animals. Special attention to flock headers. Both yearlings and ram lambs; also a few Hampshire ram lambs and one hundred superior range rams comprise our offering for the present season.
HENRY ARKELL & SON, (Tel. 355 r 2, Guelph) R. R. No. 2, Guelph, Ont., Canada.

OXFORDS AND SHROPSHIRE
A choice lot of ram lambs of both breeds. Also six shearing Shrop. ewes, twenty Shrop. ewe lambs. A few Oxford ewe lambs, also shearing and two-shear ewes.
Adam A. Armstrong, Box 402, Fergus, Ontario

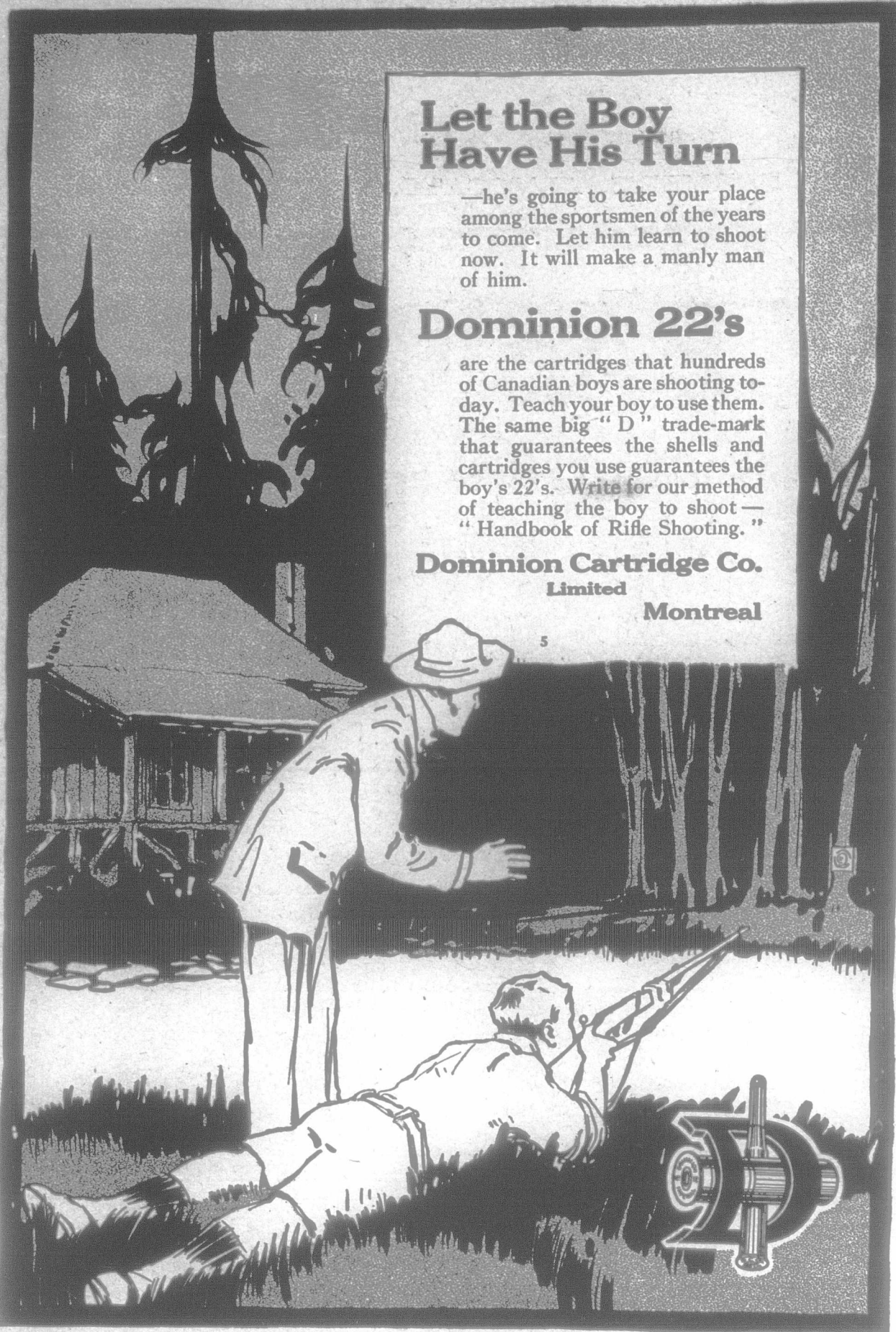
Cloverdale Shropshires and Berkshires—40
shearing rams, 70 shearing ewes, an exceptionally choice lot; true to type and well grown; nearly all sired by the show ram, Nock 16 Imp. In Berkshires, the usual strong offering, including sows just bred. C. J. LANG, Burketon, Ont.

ANOKA FARM SHROPSHIRE
won 11 firsts, two champions at Toronto, 1916. War conditions prevent an extensive exhibit this year, but can supply rams and ewes of same breeding at breeders' prices.
F. W. Gurney, R. R. No. 3, Paris, Ont., Brant Co.

Leicesters and Shorthorns
A fine lot of shearing rams and ram lambs for sale. Also a number of Shorthorn heifers of breeding age.
Geo. B. Armstrong, R.R. No. 1, Teeswater, Ont.

Leicester Sheep
RAMS AND EWES FOR SALE
C. E. WOOD, FREEMAN, ONT.
Burlington Sta., G.T.R.

THE MANOR STOCK FARM, LINCOLNS



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Have His Turn**

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are the cartridges that hundreds of Canadian boys are shooting to-day. Teach your boy to use them. The same big "D" trade-mark that guarantees the shells and cartridges you use guarantees the boy's 22's. Write for our method of teaching the boy to shoot — "Handbook of Rifle Shooting."

**Dominion Cartridge Co.
Limited**

Montreal

Gossip.

Parties wanting young bulls would do well to see those advertised by Messrs. F. Martindale & Son, Caledonia, Ont. One is a roan, two years old, a grandson of Snow Beauty (imp.) = 48662 — and by a Pansy-bred bull. One is a red two-year-old of the Lily family and by Butterfly King 19th, he by Butterfly King (imp.). This bull has several half-sisters in R. O. P. with high records and high butter-fat tests.

Another is a roan, twelve-months-old, a bull of grand type and quality, a choice dual-purpose bull of extra good breeding. Still another is a dark roan, nine months old, of the Anna family. This bull's grandam has a record of over 13,000 lbs. of milk. He is a bull of the right sort and should sire the good ones.

Messrs. Martindale write that their herd is doing well; but they have no females for sale at present.

Shropshires and Shorthorns at Maple Leaf Farm.

Maple Leaf Farm, the property of Jno. Baker, Hampton P.O., only a short distance north of the station of Solina on the C. N. R., Toronto and Ottawa main line, is noted for its Shorthorn herd and Shropshire flock, and is one of the neatest and most productive farms in the county of Durham. The Shorthorns and Shropshires, at present, as viewed by a representative of this paper recently, once more compare favorably with Ontario's best, and the present offerings in both lines furnish prospective buyers an opportunity of getting both choice individuality and breeding. The females represented among the Shorthorns are Louisas, Missies, Minas and Jenny Linds, over which has been a good breeding, Lavender-bred son of Superb Sultan. In Shropshires all the breeding ewes are bred from imported stock on both sides. At present there is an exceptionally strong offering of rams and ewe lambs, a great many of which are sired by the well-known prize winning sire, Nock 16 (imp.). Those in need of something choice in either Shropshires or Shorthorns should get in touch with Mr. Baker at once.

Shorthorns and Leicesters at Willowbanks.

There is perhaps not one Shorthorn breeder in Eastern Canada to day who follows these columns from week to week who is not quite familiar with the name at least of the Willowbanks herd of pure-bred Shorthorns owned by Jas. Douglas of Caledonia. Sixty years of continuous breeding and selecting as has been the case in this herd, has not been in vain. To-day, as many of our readers already know, the Douglas herd stands out prominently amongst Canada's best, in fact it is doubtful if there are three other places in the whole Dominion where so strong a lot of matrons make up one breeding herd. The families are, with one or two exceptions, all straight Scotch, and include a number of the more fashionable ones of to-day. At present there is an exceptionally strong line-up of two-year-old daughters from these dams and sired by the former senior sire in service at Willowbanks, Roan Chief Imp. Nearly everyone of these heifers is strong enough for many of the heavier exhibitions and they are all forward in calf to the present herd sire and show bull, Browndale. Both Roan Chief and Browndale are sires that are too well known among Canadian breeders to need any further comment, and this offering should be of interest to many who have been searching the country over for a few females that are really first class. In bulls, Mr. Douglas' offering is varied although nearly all are sired by Browndale. They number twelve in all, ranging in ages from six to twelve months and several were at the time of our visit, in excellent show form as well as being show individuals. They must be seen to be best appreciated. In Leicesters the present offering is comprised mostly of ram and ewe lambs, although from a new importation Mr. Douglas is advertising four shearing rams and two shearing ewes, all bred by Thos. McIntosh, Fogandenny, Scotland, and the rams in particular are quite a little above the ordinary. The lambs mentioned are all home-bred, but are all from imported sires and ewes.

Yorkshires

Young sucking pigs, both sexes; also young sows, four months old. Address

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Farmer's Advocate
LONDON ONTARIO

Tamworths

Young sows and boars from several litters just weaned.

HEROLDS FARMS, Beamsville, Ont.
(NIAGARA DISTRICT)

Morrison Tamworths and Shorthorns
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TAMWORTHS

Young sows bred for Fall farrow, and a nice lot of young boars for sale. Write
John W. TODD, R. R. No. 1, Corinth, Ont.

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Hon. G. H. Ferguson, Minister of Lands, Forests and Mines

Sunnyside Chester Whites and Dorsets. In Chester whites we have both sexes, any age, bred from our champions of many years. In Dorsets we have ram and ewe lambs by our Toronto and Ottawa champion, and out of Toronto, London, and Guelph winners. W. E. Wright, & Son, Glanworth, Ont.

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J. B. Pearson, Mgr., Meadowvale, Ontario.

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Burford, Ontario

Meadow Brook Yorkshires

Sows bred for Sept. and Oct. farrow, and a few choice boars fit for service. Young pigs, both sexes and all ages. Prices right. G. W. MINERS, R. R. No. 3, Exeter, Ontario. (Huron County)

BEAVER MEDI CHESTER WHITES won over 75% of the prize money at Toronto this year with three herds showing. Write us for bred sow or young boars. We guarantee satisfaction. We also have Percherons. Wm. Roberts & Sons, Peterboro, Ontario

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From our recent importation of sows, together with the stock boar, Suddon Torredor, we can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed. H. M. VANDERLIP, Breeder and Importer, R. R. 1, BRANTFORD, ONT. Langford Station on Brantford and Hamilton Radial

Gossip.

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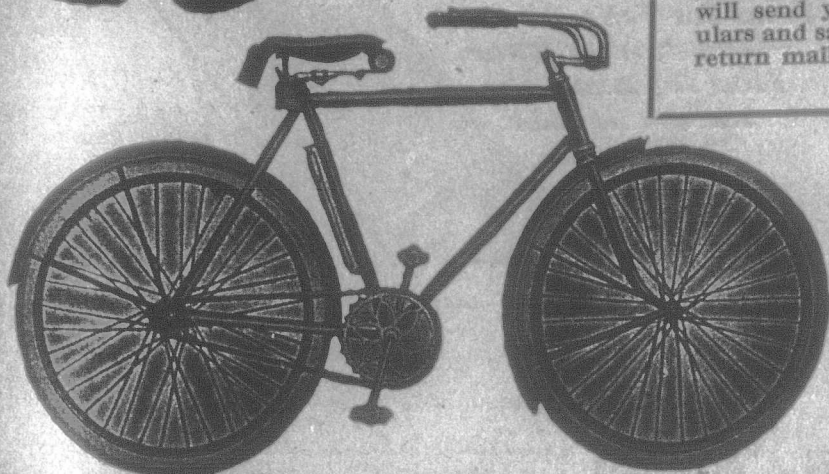
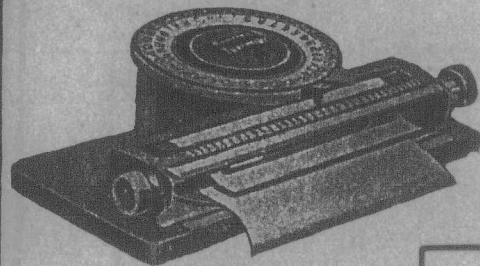
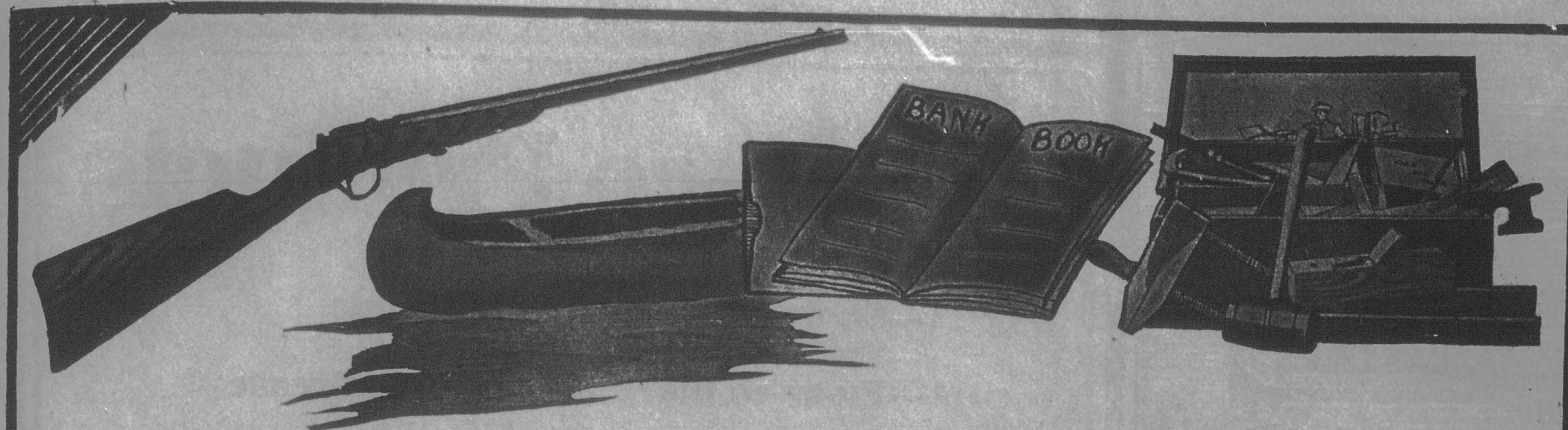
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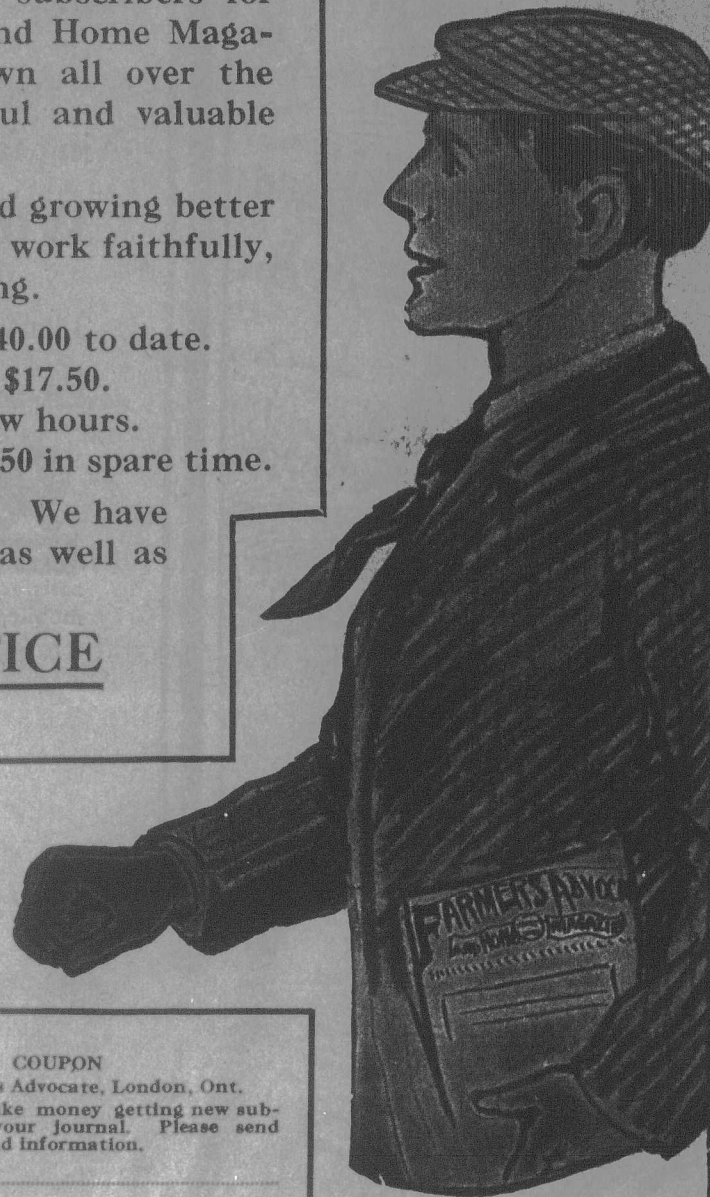
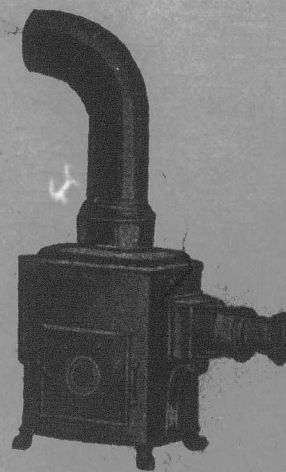
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