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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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VOL. LI.

LONDON, ONTARIO NOVEMBER 1916.

No. 1261



Royal Purple Stock Specific

An Animal Conditioner and Fattener

A 50c. package will last an animal 70 days

Good for horses, cattle and swine. Royal Purple Stock Specific is a digester, tonic and animal conditioner. It is manufactured from pure, clean, medicinal roots, barks, herbs and seeds. No harmful drugs and NO FILLER is used in Royal Purple Stock Specific. It is in a concentrated form, and needs only to be fed once a day instead of three times, as some others of a bulky nature. Royal Purple Stock Specific is always of the same quality, and it will give you similar results to what other feeders are getting. Royal Purple Stock Specific is not a dope, and can be fed at intervals or continuously winter and summer, and only beneficial results will follow. There are no bad after effects.

Royal Purple Stock Specific Does This:

It increases the flow of milk per cow from 3 to 5 pounds per day during the winter. It will enable you to fatten your steers and hogs a month earlier, thereby saving a month's feed and labor. It will put a glossy coat on your horse quickly. Convince yourself by trying a package of Royal Purple Stock Specific on your poorest, worst animal.

Our Guarantee:

Feed Royal Purple Stock Specific (according to our directions) to the poorest animal on your farm, if it does not improve the condition of the animal, and the results are not satisfactory to you, write us, and we will promptly return your money.

Royal Purple Poultry Specific

An Egg Producer and Poultry Conditioner

A 50c. package will last 25 hens 70 days

The hen cannot make or produce the egg for you unless she gets the right material to make it. In summer, fowl get grains, herbs, grass and insects, which are Nature's assistants for producing eggs. During the winter season, when prices for eggs are highest, they get practically the same grain but do not produce the eggs. Why? Herbs, grasses, insects, etc., are not available in the winter season, so you must use a substitute. Royal Purple Poultry Specific, manufactured from Roots, Herbs, Minerals, etc. (in concentrated form) is a most perfect substitute for you to use. Keeps your fowl healthy, vigorous and active, and causes them to lay as well in the winter months—when fresh eggs are few and costly—as they do in the summer months.

More Eggs When Prices Are High

The W. A. Jenkins Mfg. Co., London, Can. Ayr, Ont., Mar. 4, 1914.
Dear Sirs:—Kindly send me one of your booklets. We didn't have an egg all winter until we started using your Royal Purple Poultry Specific, and it is the best thing I have ever used. We are getting eleven to twelve eggs per day now on account of feeding them the right food.
J. BRANDON.

The W. A. Jenkins Mfg. Co., London, Can. Saskatoon, Sask., Dec. 1.
Gentlemen:—I tried feeding your Royal Purple Poultry Specific last winter. I had fresh eggs all the time. Sold eggs from January to the 1st of March, and I

The W. A. Jenkins Mfg. Co., London, Can.

A Canadian Company Serving Canadians

What Others Say of Royal Purple Stock Specific:

W. A. Jenkins Mfg. Co., London, Can. Tavistock, Ont., Feb. 1.
Dear Sirs:—This is to certify that I have used seven boxes of Royal Purple Stock Specific, and can say as a constitutioner it has no equal. The Specific costs nothing, because it puts the horse in condition, so that he gets nourishment out of every particle of food he eats; therefore he will do better on three quarts with one spoonful of Royal Purple Stock Specific than on four quarts without it.
GEO. PATTERSON.

W. P. PETERS, Kingston, Ont., wholesale and retail dealer in flour, feeds and seeds, writes us as follows:

Dear Sirs:—I would like to tell you as briefly as possible my experience with your Royal Purple Calf Meal and Package Goods.
In 1914 your representative tried hard to get me to handle some of your goods, but I refused. In 1915 I was persuaded to try a small quantity, I think about ten bags, and both my customers and myself were so pleased with the results that in 1916 I sold, as you know, four car loads of your Calf Meal, and sold only three tons of the other varieties. This year I have planned, and fully expect, to sell from ten to twelve car loads of your Royal Purple Calf Meal.

Your Package Goods have also taken the place of all others, and I expect to handle for you this year, from four to five thousand dollars worth of your Package Goods. Our leading veterinary Surgeon was in my store a short time ago, looking over the different lines of Poultry and Stock Preparations, and he told me that he had examined a great many varieties of these preparations, and declared that Royal Purple was in a class by itself, and that they contained three times the amount of real Medicine that any of the others contained.

Royal Purple Calf Meal

You can raise just as good calves on our calf meal as on new milk, and at 1/4 the cost. It is also an excellent feed for your pigs and lambs which are not thriving well. See report of Government Test at the Experimental Farm, in our Free Book. Tear off coupon at bottom, and send for it. Our Calf Meal is put up in 25, 50, and 100 pound bags.

know it was the Specific did it, and the hens looked healthy after using it. I started feeding them again this fall, and got eggs in less than a week.
MRS. W. JACKSON.

FREE

These are the Results

If you would like similar results from your flock during the winter months when eggs are high in price, start mixing "Royal Purple Poultry Specific" with their regular feed.

Royal Purple Poultry Specific is put up in 25c. and 50c. packages and \$1.50 and \$5.00 air-tight tins.

It's a hen's business to lay, it's our business to make her lay.

We will give absolutely free to any farmer, stock or poultry raiser one of our new 80-page booklets, which tells how to balance rations for feeding stock, milch cows, horses, etc. This also deals with the common diseases in poultry, the symptoms, treatments, etc. Tells how to build poultry houses; how to avoid all kinds of diseases in both stock and poultry; tells how to raise calves without milk, and describes fully the high-class stock and poultry remedies and foods we manufacture. Send for a copy to-day.

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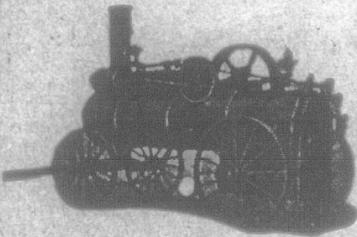
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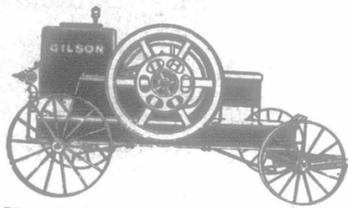
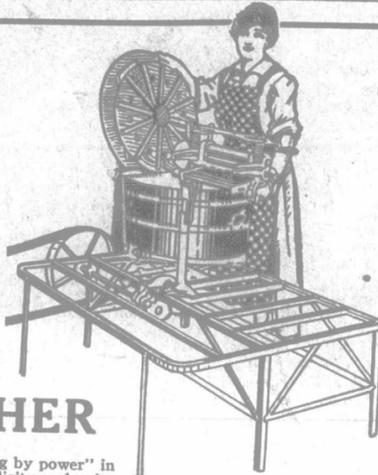
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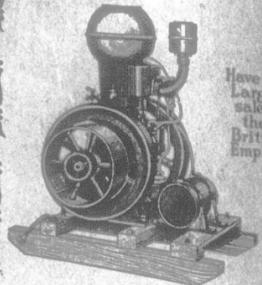
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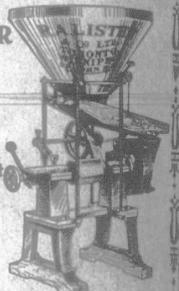


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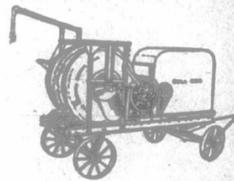
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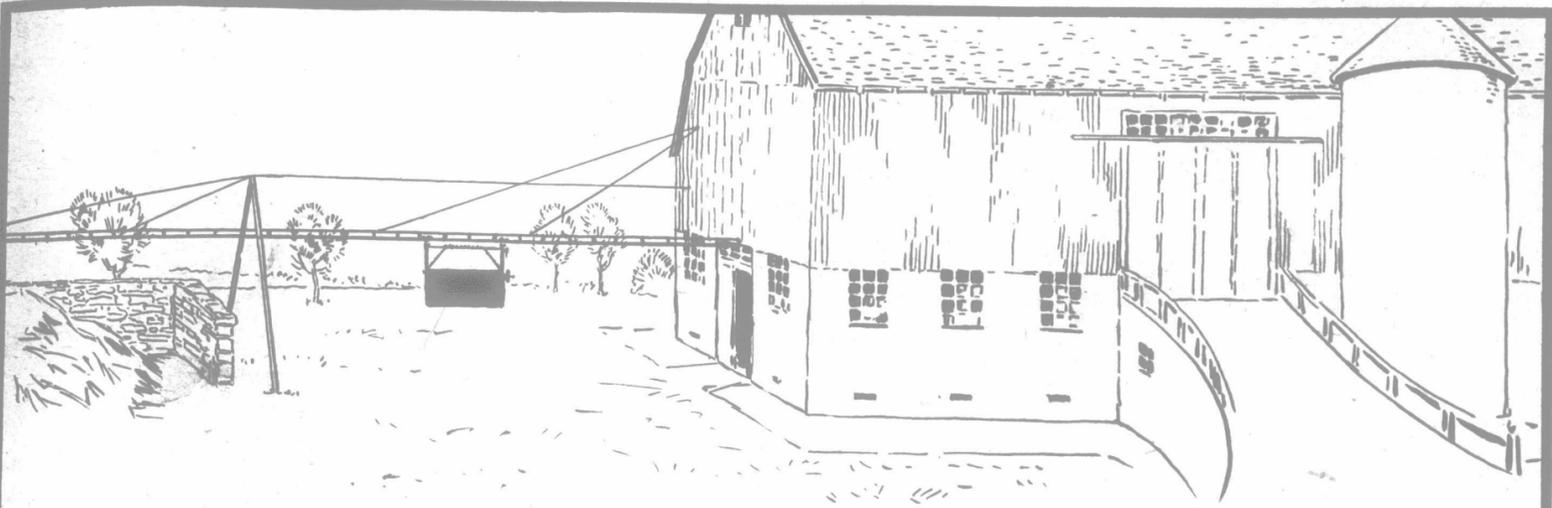


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"Yes, chores are a simple matter now, with the BT Manure Carrier to help me. Have you finished yours, neighbor?"

"No. And somehow I hate them. Toiling in the mud with the wheelbarrow is a job for a slave. Labor is scarce, I can't hire a man to do it."

"I'd advise you to put in a BT Manure Carrier before winter sets in. Come over now and I'll show you how she works. When you go home you write Beatty Bros. for their book about the BT. They'll send it free."



Manure **B**arrier Book

Tells you how to clean your stable in a few minutes. Tells how the slow old wheel-barrow and the stoneboat have become a thing of the past on many thousand Canadian Farms. Tells how to get the work done in spite of the scarcity of help.

The BT Manure Carrier is worth more to you than a hired man. You can clean the stable quicker than four men could do it, if you will let the BT Carrier help you.

The BT runs on a level overhead track from the gutter to the pile. All the weight comes on the track and you have no heavy lifting. You can push the Carrier out many feet from the barn

and dump the load, no matter what state the yard is in. It runs right over the snow and mud. No paths to dig in winter time. No slippery planks to lay in spring.

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This handle is used to raise the carrier. 14 pounds pressure on the handwheel will lift 500 pounds in the bucket. You don't have to windlass the bucket down. Just lift the handle and the carrier will drop to the floor by its own weight.

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Beatty Bros. Limited

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Send me your free illustrated book about the BT Manure Carrier

How many cows have you? _____

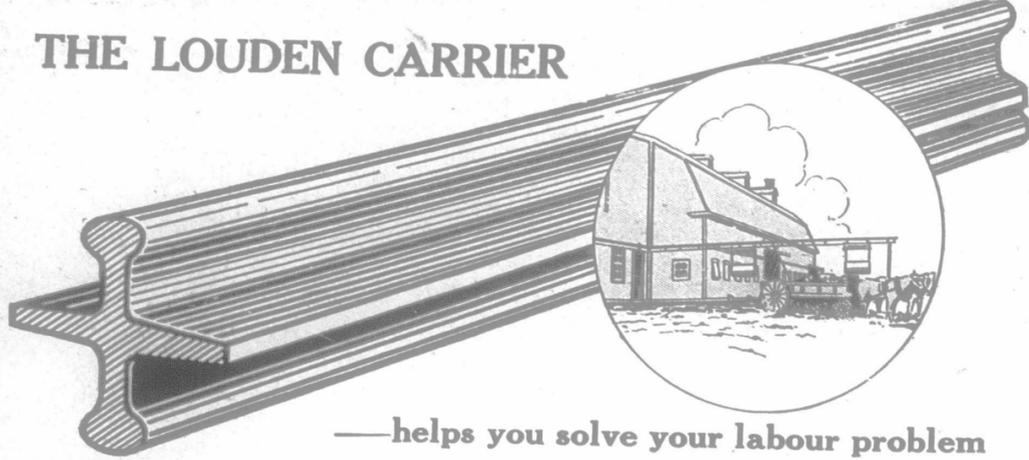
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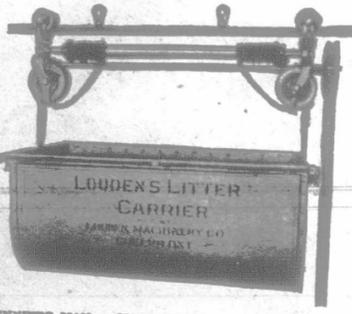
THE LOUDEN CARRIER



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THOUSANDS of Louden Litter Carrier outfits were installed when labour conditions were normal, and they have since given daily demonstrations of their value, as savers of time, and of labour. How much greater this value to-day, when farm help is scarce, and high in price. Secure

a price on a complete Louden Litter Carrier outfit from our dealer in your locality, or from us direct. You will be surprised at the low cost of the equipment, which lasts a life-time, and at the saving in the cost of performing a hard and disagreeable task.



Litter Carrier equipment to give satisfaction must be right in design, in material, and in workmanship. You can purchase Louden equipment, assured that on each count, you are getting the best.

Louden track is centre hung, weighs two pounds to the foot, and is high carbon steel. Full strength of the steel bars. They are neither punched nor drilled for splicing or attaching the hangers. This track can be curved without heating, right in your own barn.

Litter Carrier box is made of heavy galvanized steel. Strongly reinforced with angle iron. No wood to rot out, or get manure soaked.

Louden Litter Carriers will move and lift the heaviest loads, with but little effort.

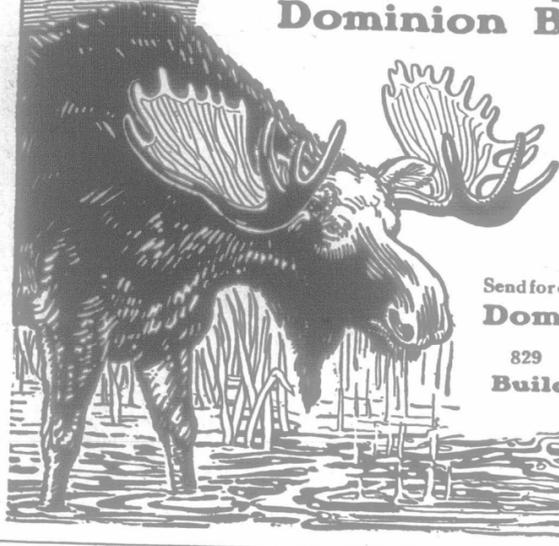
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Simonds Crescent Ground Cross-Cut Saws

This saw will cut 10 per cent. more timber, same time and labor being used, than any other brand of Cross-Cut Saw made. This guarantee has stood for thirty years.

There are two reasons for the superiority of the Simonds Saw—grinding and steel.

A saw that does not bind in the kerf cuts easy; a saw that binds is a bother. Crescent grinding insures saws ground so that the teeth are all of even thickness throughout the length of the saw, and the blade tapered for clearance to the greatest degree consistent with a strength of blade which enables the operator to push as well as pull the saw. Crescent grinding is an exclusive process, used only on Simonds Cross-Cut Saws.

Simonds Canada Saw Company, Limited, Montreal, Que. Vancouver, B.C. St. John, N.B. Always buy a saw with a sharp cutting edge—not a soft saw—because the former lasts longer and keeps its edge better

Simonds Steel will take a temper to hold a cutting edge and stay sharp for a longer time than any saw not made of Simonds Steel.

There are two reasons why you should buy Simonds Crescent Ground Cross-Cut Saws—Quality and Price.

Superior quality makes your cutting as easy as cutting can be.

The price is moderate for the saw value given. It is about the same as you would pay for an inferior saw; therefore, why not get the best for your money—a saw with the manufacturer's name, "Simonds," on it. It is your guarantee and your protection. The saw illustrated, Simonds Crescent Ground Saw, No. 22, is the most satisfactory saw for all usual sawing purposes. Insist on your hardware dealers supplying you with Simonds Saws. Write to the factory for further particulars.

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We will show you how to do it, supply you with the proper equipment, and let you pay cash for it or pay in two or three yearly payments.

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The Farmer's Advocate and Home Magazine

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LI.

LONDON, ONTARIO, NOVEMBER 23, 1916.

1261

EDITORIAL.

Round up the work. Winter is just around the corner.

The careful feeder will be most careful early in the feeding season.

Canada's reputation for pure-dairy products must remain unsullied.

The only way to avoid the high cost of living is to stop living so high.

Look at the high prices! Yes, but keep one eye on the wee bit to sell.

Fast in most things, the United States sets a snail pace in getting correct election reports.

If you have anything to sell, fit it so that you are not ashamed to show it to prospective buyers.

It is almost sickening to hear some learned people of countries not in the war talk about making a permanent peace.

In experimental work it is good practice to have actual figures to back up statements made. The eye is often deceived.

Peter McArthur puts it right when he says that both political parties will be loyal to the source of their campaign funds.

It is time, in this year 1916, that the spokesmen of both of our political parties knew better than to accuse the other party of disloyalty.

Who wants oleo? A handful of packing-house men who would make money out of selling it. These are the men ready to help the "poor consumer."

When arranging for the winter's reading in the farm home, do not forget "The Farmer's Advocate," the paper that fights for the rights of every member of the home.

The keeping of live stock is the very foundation of our national prosperity. Every high-producing dairy cow, good-breeding beef heifer, young, breeding ewe, or long, brood sow sold off the farms weakens the foundation.

Scrubby calves are worth more as steers than bulls, even though they may be pure-breds. A pure-bred scrub is the most dangerous kind, for someone will be foolish enough to use him for breeding purposes because he has a pedigree.

Every voter should keep an eye on the doings of his representative in parliament and should help keep him posted in the interests of Canadian agriculture. Those who would undermine it, for their own ends, are never idle and they must be watched. Let us all help to turn on the light.

The horse is not the only thing in the world that knows how to "balk." We were out the other day in an ordinarily well-behaved horseless buggy that balked, but we believe we had less trouble in getting started than we might have had with the balky mare. The thing stood still and had no feet to brace against being pushed ahead.

The Problem.

More men, more food, more labor—these are the calls which the country must prepare to face in 1917. The army must have more men to maintain Canada's strength at the front. The nation must have more food to meet the necessities of life. The farmer must have more labor if he is to produce more food. This is the problem of the country. We are told that the required number of men can be secured for the army during the coming winter if the proper methods are used. We would like to see these methods take the men who could most easily be spared and leave those who would be worth more and able to do more toward the final outcome of the war by staying at home and working as they never worked before. There are few farms upon which there are shirkers. Farmers, farmers' sons and farm-laborers, who have not enlisted have, for the most part, worked hard and faithfully since the war to increase production. The unusually bad season made their efforts more difficult this year, and results rather disappointing. Nevertheless they tried. True, a few farms are over-manned, but very few, and for the occupants of such who could be spared to fight there is only one term, "shirkers." But where there is one farm that could easily spare a man there are scores which, to maintain a high production, would require one or two more men. When a campaign is considered to get the necessary troops to bring the Canadian expeditionary forces up to 500,000 men, it might be well to remember that the farms of the country also require a few tens of thousands if next year's production is to reach such magnitude as to bring down the high cost of living. The army must eat or it cannot fight. Its dependents at home must have food at a reasonable cost or they suffer. The farm is the only source of supply. Farmers now on the land work harder longer hours and more days in the year than any other class. They do their best. They need more help. There doesn't seem to be much relief in sight. Farms will be undermanned in 1917. A favorable season will make a difference, but in getting the rest of the men for the army it would be well to remember that the army and all others must eat. A campaign which will get the young men who have little depending upon them and who can be spared from their twelve-dollar-a-week jobs, from the pool-rooms and from the dance halls, and from any other business which can spare them, farms included, and which would send to the farms men who are physically unfit yet useful—all men who could work to increase the output of the farms should receive undivided support.

The House and the Barn.

In driving through the country one admires the farms upon which are set large, well-planned buildings. He is led to remark upon the degree of prosperity in evidence. He drives on into another community where buildings are smaller and present a less attractive and commanding appearance. He at once concludes that the first-noted section is the more fertile, is the better managed and farmed, and that there is something lacking in the owners or tenants of the latter. He may be right and he may be wrong.

Large buildings, expensively built and needlessly spread out look very fine, but do they pay? We are certain that a farm house bigger than is necessary is a millstone around the neck of the hard-worked housewife, and a needless expense to the purse of the farmer. What is the use of a twelve or fourteen-roomed "barracks" of a house when a tidy, little, six or seven-roomed home is all that is required? The first-named costs a little fortune to build and makes endless labor for hard-worked and over-tired women who cannot find time to make it homelike. The smaller house is more easily kept clean, and the woman in the home has more time to make it a

real home and to attend to social matters which should be a certain joy in life to all women. Sometimes poor farms carry big houses, and big houses carry bigger mortgages.

But the blame is not all on the dwelling. We have often wondered whether a man was doing justice to his live stock by "putting them up" in buildings so elaborate that they could not pay their hotel bills and leave enough profit to pay for entertaining them for their few months' or years' sojourn in the farm's big bovine sanatorium. It doesn't seem fair to load the stock down with unnecessary overhead expenses and then grumble if they do not yield a sufficient margin of profit. We are not attempting to make out a case for poor buildings—not at all. But it occurs to observant people that possibly too much money is spent in expensive and unnecessary luxuries in farm outbuildings for housing live stock. Some of the "best doers" we ever saw were housed in open sheds and had the run of an old-fashioned barnyard with its ever-present straw stack. They made quick growth and rapid gains. Last week there appeared in "The Farmer's Advocate and Home Journal," of Winnipeg, Man., three pages illustrating cheap yet efficient methods of sheltering stock, and none of the methods would cost much. In our issue of November 9, the same subject was gone into fully, and this was followed up last week by articles giving in detail how to feed. Housing cheaply enables a man to feed better and still make a higher profit. Housing cheaply should not mean housing badly.

Good housing for live stock must include fresh air without drafts, sunlight, cleanliness, simplicity, convenience.

The right kind of farm house is comparatively small, neat, compact, handy, a place of labor-saving devices, light, well ventilated, easily heated, and having some sort of running water supply.

Perhaps after all the community with the big, attractive barns and houses is not the more prosperous of the two. A closer scrutiny of the inside conditions and the bank account might tell a different tale. Good homes and good barns need not necessarily mean extravagance in this direction. Let the buildings meet the actual needs and cut out the frills.

"Oleo", an "Undesirable".

In our issue of November 9 the case against oleo-margarine entering this country and against its manufacture and sale in Canada was fully and exhaustively set forth. It was proved conclusively that oleo, if admitted, would jeopardize Canada's dairy industry, that the control of its manufacture and sale would cost the country about all it would get out of the trade in revenue, that it leaves too many loopholes for deception, and that the consumer in the end would lose by its introduction into Canada. At the same time it was clearly shown that present conditions are abnormal and will continue so for, at most, a very short time. Next year feed may be plentiful and dairy products more abundant. Even as a War Measure, the Canadian Government would not be justified in giving in to the oleo manufacturers and those interested in the oleo trade. It should be remembered that these are the people responsible for the agitation for the admittance to Canada of their product. Under the guise of doing something for the poor man they ask for an amendment to our present excellent Dairy Act which excludes all butter substitutes. They themselves are the men, not poor either, mark you, who would stand to benefit most. They haven't struggled for years to build up a high-producing dairy herd or dairy products business, neither have they anywhere from ten to fifty dairy cows on hand to feed high-priced feed, a great deal of which, owing to crop failure must be purchased. They would feed the

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

Published weekly by
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JOHN WELD, Manager.

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Winnipeg, Man.

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poor man on a substitute and would make more poor men by injuring the dairy business, driving cows off the land, so decreasing fertility, which would in the end mean higher prices for other necessaries. As the output of butter grew smaller they would inevitably increase the price of the substitute and make more money.

Over in the United States 145,468,730 lbs. represented the output of oleo in 1915, and this was exceeded by about one million pounds in the fiscal year ending in 1916. The market over there is flooded with butter substitutes, just as our market would be in a short time if the packers had their way. Canada has a small population, but its people have been educated to eat and demand good butter. If oleo got a foothold here and replaced butter on a fair percentage of Canada's tables, the dairy industry must suffer. Canadian dairy products are just beginning to gain a solid place in the British market. It is worth something to be able to say they are pure, and so must remain, for no deceptive substitutes are manufactured in or allowed to enter Canada.

Coloring has been the greatest cause of trouble with the stuff. Manufacturers wanted to make a white, lardy looking article look like butter so they could reap the reward of larger sales. When it was colored to look like butter there was a temptation, not always resisted, to sell it as such. The United States has been legislating against this for years. When that country put legislation into effect to stop its sale as butter, the output of oleo dropped from 126,316,427 lbs. in 1902 to 49,880,982 lbs. in 1905, but by making substitutes almost without number and by spending large sums in advertising, the oleo interests were able to get rid of an output of 145,468,730 lbs. in 1915, and still trouble galore is experienced in keeping the trade from encroaching further than it should upon the rights of pure dairy products.

It may be argued that if only white oleo were let in it could do no harm. Let in the white and watch the manufacturers put all kinds of pressure to bear for the right to color it to look like butter. The white stuff would not find ready sale. Butter's trade mark must be appropriated to sell the substitute. It is much safer not to give in to the few who want oleo, for if they could get the thin

edge of the wedge to "bite" they would use all their "heavy weights" to drive it in to the severing point of free colored oleo.

Some argue that the packers would be able to pay a higher price for Canadian live stock. They might be able, but does anyone think they would do it? The packers who practically ruined the hog industry of Western Canada a few years ago, the packers who set the prices they will pay—they would not be likely to advance the price of beef and pork to the producer if the Government allowed them to manufacture and sell oleo. Neither would they lower the price to the consumer.

Canada had better keep all butter substitutes strictly out. The Canadian farmer and consumer are looking to our Department of Agriculture, which passed the excellent Dairy Act at present in force, to keep the bars up against oleo. The Dairy and Cold Storage Commissioner, J. A. Ruddick, as adviser to the Hon. Martin Burrell on dairy matters, will have the backing of all those interested in Canadian dairying and pure dairy products if he stands out firmly as he has done in the past against any possible encroachment of butter substitutes. The policy of dairymen is clear cut and their stand is strong and right. Oleo is an undesirable and undesirables are debarred from entering Canada.

Sound Sense on the Food Question.

In these days when city writers are clamoring for legislation and government action to bring down the cost of living, accusing farmers, cold-storage owners, all producers and dealers in foodstuffs of "holding up" prices, it is a treat to read in a city paper a fair and square common-sense article on the question. Such we reproduce here from the Toronto Saturday Night:

"Those who indulge themselves with the idea that Government can do everything, from regulating the price of gasoline to taking the squeak out of the town pump, are now demanding that the Federal authorities get after the high cost of living, and amputate the same somewhere around the waist line. Very easy to suggest, but very hard to accomplish. Food values, like other values, follow the lines of least resistance, which happen to be upward, for the very good reason that food is scarce. Ottawa reports that eggs, while scarce, and high as we know, are being consumed in Canada in larger quantities this year than last. The Western world has half a wheat crop, while the Eastern world, under present war conditions, is eating more wheat than ever, and is, of course, producing less. Millions of dollars' worth of meats are being shipped from Canada to England. When Pat Burns or some other packer gets an order for three or four million dollars' worth of hogs for foreign consumption, only one thing can happen, the price advances. And still newspapers, seeking popularity with the "peepul," argue that the Government must do something. But what will it do? Stop Pat Burns from shipping his hogs? Will the Prime Minister start on a tour of the country educating the hens on lines of greater production? Will we appoint Sir Sam Hughes Keeper in Ordinary of the beef cattle, so that the meat, neatly enclosed in tin cans, will not reach the trenches? Will the Minister of Agriculture Burbank our cows so that they will have calves in litters in place of one at a time? Perhaps Sir Tom White will, in his idle moments, if he ever has any, write a monograph on how to grow winter wheat in the winter-time. Two crops a year would help some.

"Some newspapers naively suggest—of course they are Opposition newspapers—that the Government un-cork a bottle of horns by commandeering the Western farmers' wheat. If any public man suggested such a thing between Winnipeg and the Rockies and got away with his life he would be fortunate, particularly in view of the fact that Western wheat-growers have been holding and are still holding, for higher prices, which are very likely to be achieved before the year is out. Fancy putting such a proposal before Hon. Bob Rogers for his sanction! "Forget it, boys; forget it," saith the Hon. Bob.

"When all else fails, these Davids who would slay the H. C. L. giant, set their slings for the cold-storage warehouses. By the very nature of its business cold storage cannot be a monopoly. Cold-storage machinery can be bought by anybody and operated by any mechanic. There is no deep secret about it. Plants are spread over the country from coast to coast, big and small. Some in the hands of individual owners, others in the hands of large packing corporations, who operate them for their own use. As a matter of fact cold storage is one of the greatest boons we have. It gives us perishable winter foods, such as oysters, in summer, and perishable summer foods in winter. Every city and large town has its cold storage plants, the owners of which are out looking for business. The lowest bidder gets it. There is plenty of competition, so excessive prices cannot be maintained. From the standpoint of economy, cold storage plants are among our greatest boons. They allow of the preservation of foods, so that there is practically no waste, and by its means we have the benefit of many foods the year through, which before the advent of cold storage were unknown luxuries, except for a brief period of the year.

"If we must live luxuriously we must pay the price. But we are not prepared to go back to the plain living

of a generation ago when porridge was a habit rather than a diet, when new-laid eggs in a city were about as scarce as hen's teeth, to the time when mother patched and father cobbled, and home-made haircuts were not unknown.

"If the world went on to a malted-milk-rye-bread diet for a spell, food prices would fall, but so long as we keep on consuming more than is produced we must anticipate higher and still higher prices. It is a condition for which this great world war is to blame, and no man or government can alter it one iota."

Nature's Diary.

A. B. KLUGH, M. A.

The commonest large animal in most parts of Canada is undoubtedly the Northern Deer, which is found in the wooded parts of the country from New Brunswick to the Rockies. This species, while it has disappeared from the thickly settled districts, is not only holding its own, but increasing in some localities.

The Northern Deer differs in color at different times of the year. In summer its coat is reddish brown and the hair is comparatively short, in winter it is gray and the hair is longer and coarser.

Individuals of this species vary a great deal in size, some attaining a weight of four hundred pounds, though the average weight of a buck is about two hundred pounds, and of a doe a hundred and fifty.

The bucks only have antlers which are shed yearly. Contrary to popular belief the number of points on the antlers is no sure guide to the age, though commonly five points are found on a buck six years old. The largest number of points recorded is 78 on the pair of antlers. The antlers are shed in January and in about six weeks the new antlers appear and grow until August when they are complete. They are then "in the velvet" but by the middle of September the buck has scraped them clean and polished them.

The main senses of the Deer are scent and hearing, both of which are remarkably acute. The sense of sight is not at all keen, and seems only to take notice of moving objects.

As a rule this species is a silent animal, though both the fawn and its mother have a low bleat which they use in calling each other, and the bucks sometimes utter a snort or else a shrill whistling note.

The number of young born at a time depends upon the age and vigor of the doe. A young doe usually has one fawn when two years old, and next year has two, this being the usual number of young, though triplets are not of rare occurrence. The weight of the fawn at birth is about four and a half pounds. The young are born about the middle of May, and for a month they are left by the mother in the thicket in which they were born while she goes forth to eat and drink, visiting them however half a dozen times a day to suckle them. The fawns, in their first coat are dull reddish-yellow, spotted with white, and this color-scheme renders them very inconspicuous as they lie perfectly motionless in their retreat.

At the end of June or beginning of July the fawns begin to follow their mother, and in September are weaned and lose their spotted coat.

During the summer the Northern Deer feeds on grass, herbs, aquatic plants and the leaves of deciduous trees. In the fall it eats quantities of acorns and beechnuts, upon which fare it very soon fattens up. In the winter it feeds mainly on the twigs and buds of trees and shrubs, the foliage of conifers, mosses and lichens, and on beechnuts which it paws up from beneath the snow.

The usual gait of the Deer is by low, smooth bounds, which carry it along at about twenty-eight miles and hour. It can take very high jumps and can clear a five-foot fence with ease.

This species is a strong swimmer, and can make a speed of four miles per hour in the water. It places great reliance in its swimming powers, and when pursued it almost invariably makes for the nearest water.

In the mating season in November the bucks fight frequent duels. A typical duel is thus described by Caton, quoted by Seton, as follows: "The battle was joined by a rush together like rams, their faces bowed nearly to a level with the ground, when the clash of horns could have been heard at a great distance; but they did not fall back again to repeat the shock as is usual with rams, but the battle was continued by pushing, guarding and attempting to break down each other's guard, and goading whenever a chance could be got, which was very rare. It was a trial of strength and endurance, assisted by skill in fencing and activity. The contest lasted for two hours without the animals being once separated, during which they fought over perhaps half an acre of ground. So evenly matched were they that both were nearly exhausted, when one at last suddenly turned tail and fled, his adversary pursuing him but a little way. I could not detect a scratch upon either sufficient to scrape off the hair and the only punishment inflicted was fatigue and a consciousness of defeat by the vanquished."

Sometimes, however, these duels have a fatal termination for both parties as their antlers become intricately interlocked, and both die of starvation, unless death comes more quickly in the shape of a wolf or other large flesh-eater.

The chief enemy of the Northern Deer is the Timber Wolf, and the reduction by man in the number of wolves is the main reason for the increase of Deer in many localities.

Take a hint from the market reports: "Present demand is for the better grades." Breed better stock.

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THE HORSE.

Some Common Early-Winter Ailments and Their Treatment.

The season following the hard work of fall, when the horses have been liberally fed and pushed to the limit day in and day out, in a final effort to get the plowing done and the fall cultivation completed ready for winter and spring work, is not the easiest on the horses. The hard-worked horse, suddenly deprived of strenuous exercise, and the colts brought in from the field to dry feed, require a certain amount of care in feeding to prevent digestive derangements and other troubles. Feed is scarce on most places this year, but hay is plentiful and no doubt there will be a tendency, particularly in the beginning of the season, to feed rather liberally on hay and to allow less exercise than would be in the best interests of the horse stock. Colds are common at this season; legs stock, coats become stary, scratches are prevalent, lymphangitis in thick-legged horses gives its greatest difficulty in control, distemper may develop, thrush may injure the feet, and other diseases may result owing to the sudden change in conditions from hard work and a measure of green feed to idleness and an exclusive ration of dry feed. It is, then, not out of place to discuss some of the commoner troubles.

Staring Coat.

A horse that is out of condition very often shows the lack of proper nutrition in the form of a harsh, dry coat. In cold weather it is impossible to keep the coats of some horses short, fine and glossy. Nature demands a growth of hair at the approach of cold weather, and the only thing that can be done externally is to groom well and blanket. Of course it is impossible and not necessary to blanket the farm horses stabled in a proper manner, and veterinarians advise against the administration of drugs having as the object the improvement of the coat, but where horses are out of condition it may be necessary to give a tonic, and before doing so it is wise to purge with from 6 to 8 drams of aloes and 2 drams of ginger, and follow up with one dram each of sulphate of iron and gentian twice daily for a time.

A little bran, fed in conjunction with a few crushed oats, and clover hay of finest quality, will help matters right with the horse. Such horses, of course, should have sufficient daily exercise.

Most farmers do not take the time or trouble to groom all their horses in the winter, but for such as are not doing well it would be good practice to groom each day, thoroughly disturbing all the hair by rubbing in both directions with a currycomb, following this by smoothing down with a good, stiff brush. To make a complete job the horse should be rubbed with a cloth. The work horses would gain up more quickly after the busy fall season if groomed every day, and they would also be the better of purging when going on to dry feed exclusively, particularly if any signs of derangement are noticed.

Stocking.

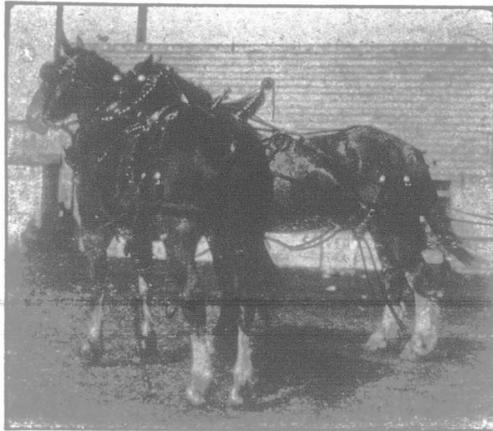
Possibly no other trouble is quite so common with heavy horses, when first going into the stable in the fall, as stocking. Even light horses often show a thickening of the legs when idle on dry feed, particularly if they are rather heavily fed. At this time circulation is rather sluggish in the extremities, and lack of exercise is a contributing cause to the trouble. True, some horses are predisposed to stocking on account of faulty conformation. Exercise is one of the best means of overcoming this trouble. Poor digestion and carelessness are often found increasing the difficulty of keeping the legs normal. Constipation is often associated with the disease, and feeders should aim, in so far as possible, to prevent it rather than incur the difficulty of curing it. Those farmers who have a few roots should in every case save some of the best turnips or mangels for the horses. Carrots are better still, but on the average farm carrots are not grown in any quantity. A good-sized mangel or turnip once daily, preferably at noon, will go a long way towards keeping the horse's digestive system right. Roots are rather scarce this year and to take their place a feeder may use, to good advantage, a feed of scalded bran twice weekly, or a little linseed meal once daily. Some good feeders use a little raw linseed oil, mixed with the grain ration once daily. For those who will not go to this trouble and who do not care to buy bran or other feeds, a feed of boiled oats or a little boiled barley once or twice a week will give fair results. At this season, it is almost essential to make some slight changes from dry hay and oats in order to keep the horse's digestive system acting properly. Some believe that feeding on rolled oats is preferable to whole oats and that less leg trouble results from the practice than when whole oats are fed. One thing is certain, rolled oats can be made go a little farther than whole oats, and this is an important consideration in a year of scarcity of feed.

Those horses which have showed unmistakable signs of stocking should be purged with from 6 to 10 drams of aloes according to size, and 2 drams of ginger. When purgation has ceased and the bowels have regained their natural condition a dessertspoonful of saltpetre should be given in damp feed once daily for three or four days. This acts upon the kidneys. Hand rubbing of the legs frequently gives beneficial results, and sometimes it is necessary to bandage with woollen bandages, however, this is not commonly resorted to in treating horses which stock up in the fall. Do not

forget the exercise. Have the horses out in the yard for several hours each fine day unless they are doing some light work about the place.

Thrush.

Thrush is another disease which gives some trouble at this season of the year, particularly where stables are not kept properly cleaned, and the horses' feet are not cared for as they should be. Thrush is a disease of the fall and winter and cleanliness is essential in its treatment. Where the disease appears, clean out the cleft of the frog thoroughly and keep the animal in thoroughly dry quarters. Mix one part of formalin to three or four parts of water and pour a little into the cleft. Then put a little batting in to keep out dirt. Remove the batting every second day, clean out, put in more formalin, and plug with batting again until discharge and odor cease. It is well to keep the heels pared down and the feet clean and dry. Another remedy which may be used in place of formalin is calomel. Cleanliness is absolutely essential in the prevention and cure of this disease.



A Farm Team.

This team owned by A. O'Neil, Denfield, has won the special class for farmer's team at London two years in succession.

Scratches.

A common trouble in almost every stable is scratches or cracked heels and the fall of the year with its mud, snow and slush, generally finds many horses suffering from itchy, sore fetlocks and heels. The skin becomes red, swelling is noticed, heat and tenderness result. The swelling will go down with exercise, but in time cracks extending across the leg will be noticed and in cold weather these cracks often bleed a little. Where cases have become chronic the swelling does not disappear with exercise. As is the case with most diseases, the first thing to do is to seek the cause and remove it. Keep the horses at rest for a few days if possible and purge as previously directed in this article. Feed bran only until purgation ceases and follow this up with 3 drams of nitrate of potash twice daily for a week or ten days. Many horsemen make the mistake of washing their horses' legs at this season of the year. To be successful in treating scratches, water must be kept away from the legs and they must, in all cases, be dry-cleaned. When the horse comes in with his legs wet, or with mud, snow and ice frozen to them, it is well to wipe the legs dry with wisps of straw or with a cloth. In cold weather lotions should be avoided

because they have an astringent effect and dry up and harden the skin, causing it to crack open again. At this season oils or ointments have a more softening and at the same time antiseptic effect and owing to their nature tend to prevent cracking. In applying an ointment, it should be put on, if the horse is being used, before he is taken out, and freely used three or four times daily. Oxide of zinc ointment to which is added 20 drops of carbolic acid to the ounce is recommended by "Whip". Where a horse is in low condition and the trouble appears to be largely constitutional it is well to give, in addition to the aforementioned treatment, 1½ ounces Fowler's solution of arsenic twice daily for a week. For scratches then, careful feeding is necessary, legs must be kept dry, the horse should be exercised, and a healing ointment applied.

Lymphangitis.

Lymphangitis is sometimes called Monday-morning disease and horses predisposed to stocking and swelling of the legs sometimes develop this disease, which is very often more troublesome in the fall when the horses first become idle. Purgation is necessary in the beginning of treatment. This should be followed up with 2-dram or 3-dram doses of nitrate of potash three times daily. Local treatment consists in bathing at frequent intervals and for considerable time with warm water, applying camphorated ointment or other liniment after bathing. Horses showing this disease should not be exercised until soreness and lameness have disappeared. Grain rations must be reduced and bran should be substituted for a part of the oats. Keep comfortable, dry, and in a stall free from draft. There is a tendency for this trouble to become chronic and horses predisposed to it should be carefully exercised regularly and fed lightly when idle.

Coughs and Colds.

Coughs are common at this season of the year, owing to changeable weather, drafts, etc. A horse with a cough should be fed on first-class feed only and the amount of hay should be limited. It is well also to dampen all the hay and grain fed, with lime water. Give each night and morning 2 drams of solid extract of belladonna, 1½ drams gum opium, 1 dram camphor, and 20 grains of powdered digitalis. Moisten with treacle and give as a ball, or shake up with a pint of cold water and drench. Care should be taken to keep the stable free from drafts and if in a cold stable it would be well to blanket for a time until the cough stops. Be careful in removing the covering that the animal does not take further cold.

Influenza.

Influenza is a frequent winter trouble and often begins with the cold weather. In bad cases it is always wise to employ a veterinarian, as the disease is dangerous. In mild cases which the owner decides to treat himself, it is wise to keep the animal comfortable in a well-ventilated stall free from drafts. It is good practice to steam the nostrils three times daily, by holding the horse's head over a pot of boiling water to which has been added half an ounce carbolic acid. It is also good practice to rub the throat twice daily until it blisters, with equal parts spirits of ammonia, oil of turpentine, and raw linseed oil. Give 1 dram quinine and 2 drams chlorate of potash three times daily by dropping on the back of the tongue out of a spoon. Never try to drench as the horse's throat is liable to be so sore that he cannot swallow. If the animal becomes weak it may be necessary to give milk, eggs and possibly a little whiskey to drink in order to maintain strength. Feed out of a high manger.

We give these few hints taken from answers which



Some Clydesdales at Pasture.

our veterinarian has in the past given to questions on the various diseases, that readers may know how to treat some of the commoner diseases of their horses this fall.

LIVE STOCK.

Salt is cheap, but cattle like it.

Some alfalfa or clover leaves are excellent for swine.

Provide a box containing ashes, bone meal, charcoal and sulphur for the swine.

Don't forget the importance of palatability and succulency in winter feeding.

Trim the tails of feeder cattle and run the clippers along the back, then apply the louse powder.

Small entrances to sheep pens are dangerous. When frightened they are liable to rush in and injure some of the flock.

Make some provisions for the breeding swine so they can be out doors and get plenty of exercise. The colony house makes this possible.

For best results, separate the lambs from the ewes, but do not confine either in close quarters. Give them plenty of range and a dry shelter, free from strong drafts.

Cattle to be fattened should be fed a full ration of cut straw and silage or roots for the first month. Then introduce the grain gradually. Just as good gains are made in this way as though chop be fed from the first.

The cattle should be rid of lice as soon as they come into the stable. One part hellebore to four parts of cement makes a good louse powder. Sift it along the back and work it into the hair with the currycomb. Its weight will carry it down their sides.

There is considerable inspiration for Shorthorn breeders to be derived from the recent auction sale held by William Duthie, Collynie, Scotland. An April bull calf, Clipper King, brought 2,200 guineas (approximately \$11,000) which rather suggests that Old-Country breeders are still in the business. Clipper King was by Masterstroke, and out of Collynie Clipper VI., by Adbolton Rosy King. He is a red-roan in color, thick and smooth and good behind. He is not big, but is full of quality throughout. The same atmosphere and associations that enthused Cruickshank, Bates, Booth, and all those makers of Shorthorn history, still inspires the men of Britain, but perhaps there are other reasons for their grand success. Regarding this the Scottish Farmer says: "A British-bred Shorthorn has merits which no other Shorthorn in the world possesses. For this the British breeder is less indebted to himself than to the indefinable something in the soil and climate of these Islands which makes them the stud farm of the world."

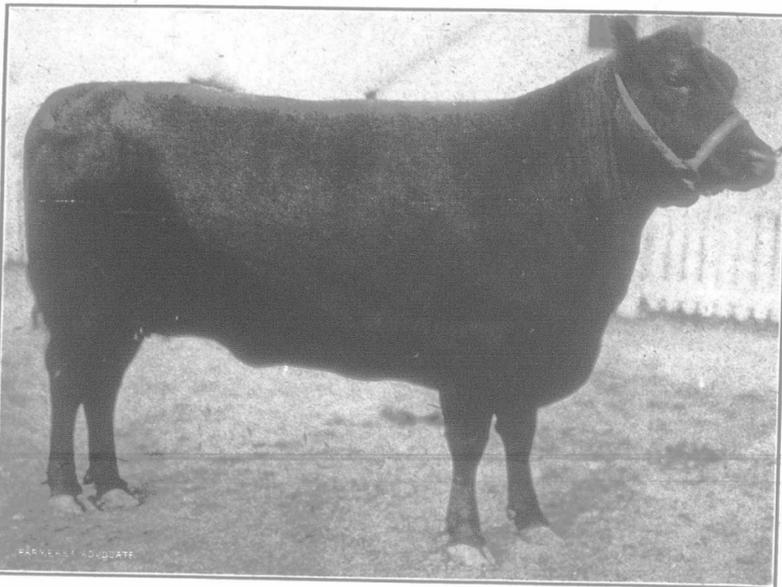
Some Mill-Feeds and Their Special Uses.

We cannot get away from the fact that mill-feeds are an important factor in live-stock husbandry. He is not a poor farmer who buys this class of feeding stuffs, provided his farm is also yielding him a reasonable supply of grain and fodder. Good stock farming depends in part on so tilling the land that it will produce abundantly of grain, hay, roots and corn. These are the first essentials in the way of feeds and often the occasion arises when some cottonseed meal, oil cake, gluten, bran, middlings, etc., can be used to an exceedingly good advantage, both in the way of providing variety and securing protein to augment feeds that are not rich in that constituent. Roots and silage are hard to surpass for the succulency that makes thrifty breeding stock and sappy, lusty youngsters in the herd. Clover, alfalfa or mixed hay are necessary, and so are straw, corn fodder, etc. We can do without some of them, but the more variety there is in the roughage and concentrates the more palatable is the mixture. Then come the grains so necessary to produce gains and milk. Oats, barley, corn and wheat are staples, and from all these different grains and roughages mentioned it is possible to combine a ration upon which almost any class of stock will do well, provided plenty of clover or alfalfa hay is available. Under such circumstances the need of buying mill-feeds is not, at first, apparent, but many cattle feeders find that with the use of some cottonseed meal or oil cake they can feed enough more steers to make the investment profitable. Such feeds have much fertilizing or residual value, so there is a second source of profit that will subsequently be returned in heavier crop yields. Furthermore, we must consider instances where some part of the stores are light. It may be grain or it may be roughage, but in either case mill-feeds serve a useful purpose. The season of the year and market prices make this an opportune time to consider them in their respective roles.

The Function of Different Feeds.

In the live-stock department of last week's issue, a table was reproduced showing the composition of our common feeding stuffs. From it we learn that

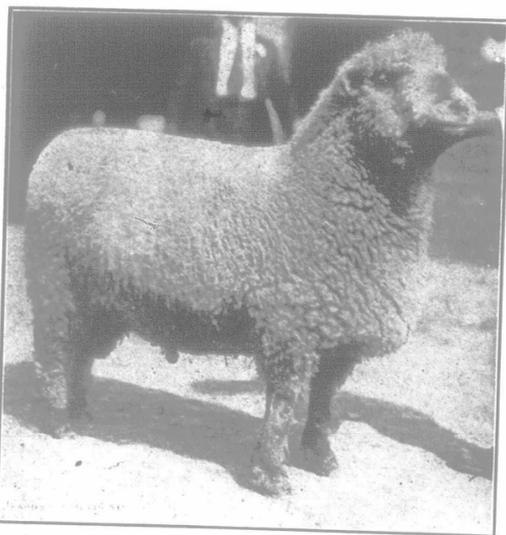
100 pounds of cottonseed meal contain approximately 37 pounds of crude protein; some of it will average more and some less, but notwithstanding, it is one of the richest of the feeds in nitrogenous matter or protein that we can buy. Prices vary from week to week and slightly with the locality, but generally speaking it can now be obtained around two dollars per cwt. At twenty cents per pound for nitrogen and five cents per pound each for phosphoric acid and potash this meal has a fertilizing or manurial value of \$32.50 per ton. This can be learned from the three columns of the table showing the fertilizing constituents in 1,000 pounds, and it is a factor worth considering. We can buy mill-feeds from time to time, but upon the fertility of the soil we must depend for abundant crops, without them it is no use trying to feed live stock. The uses for cottonseed meal are many, but commonly



Middlebrook Beauty 6th.

First-prize two-year-old Aberdeen-Angus heifer at the Canadian National Exhibition 1916. Exhibited by John Lowe, Elora, Ont.

it is not the best feed for pigs, calves or sheep, probably it is the most serviceable in the dairy stable, yet it is now being utilized more and more in the feed lot. Cattle feeders mix a couple of pounds of cottonseed meal with the chop when feeding silage and straw, with excellent results. Live stock do not take to it readily at first, but when it is introduced gradually they soon acquire a taste for it and eventually relish it. Up to five or six pounds per day could be fed to a fattening bullock, but the most economical results should come from about two pounds, when it will add tone to a ration of straw, silage and chop. Stockmen have no reason to look askance at cottonseed meal, for it is



A Typey Oxford.

Champion Oxford ram at the Canadian National Exhibition 1916. Exhibited by Peter Arkell and Sons, Teeswater.

one of the cheapest sources of protein on the market and an excellent concentrate to feed with roughage or to conserve grain.

Oil cake, or linseed-oil meal, is another protein-rich concentrate that is liked very much in the stable. It is useful for practically all kinds of stock in two ways; first, for its nitrogenous constituents, and second, for its laxative effect on the digestive system. It usually carries in the neighborhood of 30 per cent. protein. The nitrogen, phosphoric acid and potash contained in oil-cake meal are worth approximately \$26.50 as fertilizer and a considerable portion of them is voided. In some localities this feed is retailing at \$2.25 per cwt., but in ton lots no doubt a better rate would be quoted.

For calves, store or feeder cattle, dairy cows, horses, sheep and swine, some oil cake is an excellent tonic and source of protein. For all classes of stock except dairy cows it seldom pays to feed more than 2 pounds per day. Just a little for sheep and swine is sufficient; bran or chop, while 1 to 1½ pounds per day is usually ample for a horse. Commonly for this purpose, a good handful twice a day is sufficient. It is a good conditioner of horses and will advertise itself in their hair and general thrift. It will also hasten shedding of the hair in the spring. This concentrate is being used more and more all the time by cattle feeders, who make some gains through the winter and finish on grass. Cattle so fed are thrifty and do well after a period on silage, straw, chop and oil cake. The entire mixture of concentrates in such a case seldom exceeds two or

three pounds per day, except when the bullocks are to be sold on the early summer market. Oil cake comes from the press in the form of a large slab; this is crushed into the nut form, or ground into meal. It is preferred by many in the nut form.

Gluten meal and gluten feed are by-products of the manufacture of starch and glucose from corn. The gluten feed is much the same as gluten meal with corn bran added. Both are rich in crude protein, but only fair in carbohydrates. They make good feed but are usually fed in the dairy stable, so we shall not elaborate on them here.

Middlings and bran are too well known to require comment at this time. Some bran, we believe, could be used to advantage this winter, especially for calves, and where roots and silage are short. It has considerable laxative effect and actual feeding value. If there is any place where

middlings will show profitable results this winter it is in the ration for young pigs. Many are being sold at small prices on account of light grain crops. If these were retained at home and fed middlings, with a little skim milk, slops, and by-products of the household, they could be brought along to a good size. Then, with some chop, and perhaps a little oil cake added to the ration, and a few roots, these swine would finish in the spring very profitably, as the prospects are for high-priced pork.

There are other mill feeds and by-products of the distilleries and breweries that can be utilized to advantage under certain conditions, but those mentioned are in general use. Conditions demand that we understand the feed we have on hand and the concentrates obtainable for the best results accrue to those who study them from the dollars-and-cents basis, and we can only do that when we know their value for feeding purposes.

While we can ascertain the constituents of all feeds, we do not always appreciate the value of succulency and palatability. A feed may be ever so rich, but if the animal does not relish it the chances are he will not do well on it. Roughages and feeds somewhat poor in feeding value can often be so mixed as to have succulency and palatability and make splendid feed. Feeders should try to provide as much variety as possible, and by gathering together some of their corn fodder, clover chaff, straw, and unmarketable hay they can, with a little cottonseed meal or oil cake bring cattle through the winter in good condition to go out on grass and make profitable gains.

English Live Stock Prices keep High.

EDITOR "THE FARMER'S ADVOCATE":

Prices paid for pedigree live stock, whenever or wherever it comes into the market, are remarkably high, and there is a set determination in the Kingdom to breed and to keep only the best, awaiting the great expansion that is bound to come the world over after the War is settled.

At Newton Granger, Herefordshire, in mid-October, Edwards, Russell & Baldwin, disposed of the entire herd of Hereford cattle, property of George Butters. The ninety-four animals realized the total of 6,574 guineas, an average of nearly £74. Of the bulls, Newton Realm, a yearling, sold for 230 guineas to P. & G. Hughes, Crewe, who purchased for the Argentine market chiefly. Sir John Cotterell gave 200 guineas for Newton Dogma, and J. H. Williams, Castel Du, Pontardulais, was the buyer of Newstead, a three-year-old bull, for 175 guineas.

Among the cow and calf transactions were the following: Dorothy 4th, 115 guineas, Lord Rhonda; Bountiful, 125 guineas, Mr. James, St. Fagans, Cardiff; Lady 3rd, 100 guineas, Mr. James; Gay Lass 2nd, 185 guineas, Mr. James; Mabel 4th, 150 guineas, Mr. James; Elsie, 115 guineas, Mr. Coxon, Webton Court, Hereford; Laura 2nd, 115 guineas, Captain Hinckes; Bounty, 115 guineas, Mr. Thomas, Warnham; Lady 4th, 110

guineas, Mr. Myrtle 3rd, Amaze, 110 guineas, M. 110 guineas, M. bull calf, 105 guineas, Leominster; Aston-on-Clyde, Lulsley, 14 guineas, 14 guineas, 404 guineas, Those who wrong. At Hackneys, a fourteen head nineteen yearling colt was paid by J. King. This famous Forest for Towthorpe Briggs gave a stallion Adbolton mare, Adbolton Lysaght.

For the late Shire Horse Society stallion King to him at 20 guineas. The Society have a deal, but the defect in the small tenant farm him and getting instance, at Crewe colt foal, bred after winning section Collins for 300 guineas, Rowthorpe bred by another near Chester, was the price. Ash Childwick, another tenant son of Childwick the English far

High figure Spurling and He. The top figure of 1913, sire Sudd of Bricklesham, the purchaser of Suffolk filly by Agnew, M. P., appears from the in popular favor

Some good p. of W. W. Poll's horn cattle that was realized by bred by M & P. Wills, of Bristol. E. Wills gave 3 Northern Star, also secured Hinch of 10.36 lbs. of Captain Buxton by Eva's Prince for Honeydew (three years) foal heifer, Eva's Prince Dimmock for 11 realized for fifty 16s. 2d., and five

The London Islington, from December 8th, were concerned. The schedule, in classes are provided every section, however reduced, £2,509 against £

The Thorough place on the last National Pony whilst the Hackney days of the following Horse Show will that being the case, a return to "Records" in just now, as plenty land, with its Cow with many individual up Shorthorn. George Harrison, has just got 1,100 Gainford Ringlea and sired by Colly by Pride of Tees prize Royal Show Harrison considered or owned.

George Harrison and, as the result foremost place. prizes, more than ships, have been the Royal Dublin mals purchased from selves in the British foreign countries. Mr. Harrison from the show-ring show were included

guineas, Mr. Pitt; Echo 6th, 100 guineas, Mr. Pitt; Myrtle 3rd, 110 guineas, Mr. Farr, Linton; Newton Amaze, 110 guineas, Mr. Cave; Kimbolton Princess, 110 guineas, Mr. Weston, Much Marcle; Newton Baron, bull calf, 105 guineas, Captain Heygate, Buckland, near Leominster; Newton Ruby, 110 guineas, Dr. Cranstoun, Aston-on-Clum; Dorothy 3rd, 105 guineas, Mr. Powell, Lulsley. The cows and calves realized 4,309 guineas, fourteen two-year-olds, 1,046 guineas, and ten yearling heifers, 404 guineas.

Those who declare the Hackney is a spent force are wrong. At the Adbolton sale of A. W. Hickling's Hackneys, a record average of £238 8s. was made for fourteen head, of which four were foals, one a mare nineteen years old, and another a cripple. For the yearling colt the "highest yet" price of 570 guineas was paid by J. Chivers for the stylish Adbolton Forest King. This colt is related to Judge Moore's one-time famous Forest King. Mr. Putman paid 540 guineas for Towthorpe Iris, the great brood mare, and Walter Briggs gave 650 guineas for the London champion stallion Adbolton Kingmaker. The London champion mare, Adbolton St. Mary, went for 460 guineas to W. R. Lysaght.

For the last three seasons the Crewe (Cheshire) Shire Horse Society have paid £1,000 for the hire of the stallion King of Tandridge, and they sell nominations to him at 20 guineas and 15 guineas to members. The Society have actually cleared a profit of £50 on the deal, but the good the King of Tandridge does is reflected in the prices his youngsters make. All the small tenant farmers in that part of the county are using him and getting big money for his "babies." For instance, at Crewe, on October 20th, a King of Tandridge colt foal, bred by T. Prescott, Kinderton, Middlewich, after winning several cups and specials, was sold to Denby Collins for 300 guineas, highest price of the sale. A filly foal, Rowton Fine Feathers, by the same sire, and bred by another tenant farmer, J. Beech, at Bowton, near Chester, was sold for 200 guineas, and that, too, was the price paid for Mr. Egerton Orme's colt foal Ash Childwick, the champion at the show, bought by another tenant farmer, R. Evans. Ash Childwick is a son of Childwick Champion. The Shire is undoubtedly the English farmer's sheet anchor.

High figures were realized for Suffolk horses at Spurling and Hempson's sale of Suffolk horses in Ipswich. The top figure was obtained by Pearl, a fine filly foaled 1913, sire Sudbourne Abbot, consigned by R. V. Pain, of Bricklesham, which changed hands at 125 guineas, the purchaser being M. G. Hale, of Akenham. Another Suffolk filly by the same breeder was sold to Sir George Agnew, M. P., for 120 guineas. The Suffolk "Punch" appears from this and other recent sales to be increasing in popular favor all over Eastern England.

Some good prices were realized at the dispersal sale of W. W. Poll's herd of very short pedigreed dairy Shorthorn cattle at Hethersett, Norwich. The top price was realized by Lacy Ringlet 2nd, a six-year-old cow bred by M. & P. Perkins, sire Coleshill Ranger, Captain Wills, of Bristol, being the purchaser at 320 guineas. E. Wills gave 310 guineas for Hindlip Dorothy 3rd by Northern Star, and bred by G. Gerrard, and Mr. Wills also secured Hindlip Dulce, which had given an average of 10.36 lbs. of milk for four years, for 180 guineas. Captain Buxton bought Hethersett Barrington Bates by Eva's Prince for 200 guineas, and gave 120 guineas for Honeydew (seven years). Hethersett Milkmaid (three years) fetched 135 guineas, and a two-year-old heifer, Eva's Princess by Eva's Prince, went to J. B. Dimmock for 110 guineas. Altogether £3,996 6s. was realized for fifty-two cows, giving an average of £76 16s. 2d., and five bulls fetched in the aggregate £177 9s.

The London Smithfield Show, which is to be held at Islington, from Monday, December 4th, to Friday, December 8th, will be—so far as fat stock and dead meat are concerned—practically the same as in recent years. The schedule, in fact, shows a small advance, as 144 classes are provided for as against 143 last year. In every section, however, the value of the prizes is somewhat reduced, the aggregate amount offered being £2,509 against £4,439 a year ago.

The Thoroughbred and Hunter Shows will take place on the last days of February next, and, with the National Pony Show, will occupy five days of a week, whilst the Hackney Horse Show will be held on three days of the following week. Presumably the Shire Horse Show will be held first in February as usual, and that being the case there will be, for all practical purposes, a return to the normal in our spring shows.

"Records" in Shorthorn breeding in Britain are, just now, as plentiful as leaves in Vallambrosa. Scotland, with its Collynie sales, of course, leads the way with many individual records, but England is piling up Shorthorn "stories" in the way of tall figures. George Harrison, the Gainford Hall, Darlington, expert has just got 1,100 guineas at auction for a bull calf, Gainford Ringleader, a roan calved January 9, 1916, and sired by Collynie Mandarin, out of Gainford Warfare by Pride of Tees. This young bull calf has six first prize Royal Show winners in his pedigree, and Mr. Harrison considered him the best bull calf he ever bred or owned.

George Harrison's herd was founded 34 years ago, and, as the result of good management, soon took a foremost place. During the last 22 years nearly 3,000 prizes, more than half of which were firsts or championships, have been annexed at the Royal, the Highland, the Royal Dublin, and other shows. In addition, animals purchased from this herd have distinguished themselves in the British and Canadian show-yards and foreign countries and colonies.

Mr. Harrison having definitely decided to retire from the show-ring, all the young stock suitable for show were included in the sale.

The nine heifer calves were first disposed of. They realized 723 guineas in the aggregate; the top price of 200 guineas being paid for the handsome roan, Gainford Laurel 2nd, by Matthew Marshall, for export to the Argentine. She is also by Collynie Mandarin, out of Pierrepoint Laurel, and is own sister to Gainford Emperor, recently sold in the Argentine for 3,060 guineas. Another useful roan heifer calf is Gainford Grand Duchess, purchased by Mr. J. Harris, of Carlisle, for 110 guineas. The six yearling heifers averaged exactly 68 guineas each. Four two-year-old heifers made 574 guineas, an average of 143½ guineas each.

The eleven cows with ten calves aggregated 1,699 guineas, an average or close upon 154½ guineas each. William Duthie paid top price for Gainford Rosemary, a four-year-old rich dark roan by Proud Broadhooks, and again in calf to Proud Victor. Her white cow calf, by Collynie Mandarin, was knocked down at a 100 guineas to J. Durno, of Tarves. The five bulls sold collectively for 1,593 guineas, an average of 318 3-5 guineas each. The total sale realized 4,997 guineas, an average of roughly 142¾ guineas each for the 35 lots sold.

Hereford cattle are selling like hot cakes. John Bourne, who had built up a herd from Stocktonbury and Chadnor blood sold 85 head off at Burghill, Hereford, on Oct. 26th, for 2,874 guineas, or an average of £35 10s. The auctioneer, Frank Russell, got 63 guineas for a yearling heifer, and that was top price. He stated that he had sold over 100 Herefords at an average of 100 guineas each this year.

John Bounds who is giving up The Lowe, his farm at Penbridge, Hereford, has sold off his whitefaces, the 54 head making an average of £49 12s. The stock bull, Conway, fell to Lord Rhondda's bid at 260 guineas. This is the highest individual price paid for a Hereford in 1916. The cow, Pansy 8th, made 66 guineas herself but she is one of the unwritten heroines of the whitefaced breed. She has produced 14 calves, and Lord Rhondda secured two of her heifer offspring, Pansy 24th, for 75 guineas, and Pansy 18th for the same figure. Three of her bull calves have been sold to P. & G. Hughes for exportation at 130 guineas, 100 guineas and 50 guineas apiece. Another bull son of hers has made 70 guineas, so the old lady has done her duty nobly to the breed.

W. G. C. Britten, the Secretary of the English Hereford Cattle Society, is in U. S. A., and has sent over some of his impressions. At a few of the leading fairs he has attended there, he declares that he has been struck with the splendid general average quality of the stock. He was impressed more with the female cattle than the male. With regard to the bulls, he believes the English males at home are superior to the American tops. The latter lack size and bone. They are beautifully made, level, symmetrical, full of quality and boast an excellent color, and markings, and good horns and heads, but lack those very essential points—size and bone. Britten was impressed with the group classes and thinks they would be an object lesson to the English breeder. He advises Englishmen to stick to their cows and concentrate all their efforts on producing the best bulls. They must continue to breed for size and bone. He thinks America will have to go to England for some further fusions of blood with which to repair the bone and size of the original type. ALBION.

THE FARM.

Lest We Forget the Fire Tragedy.

EDITOR "THE FARMER'S ADVOCATE":

Saturday, July 29, 1916, will long be remembered by all who lived in the North Country. It is only those who had the experience who can possibly realize how utterly powerless a bush fire can render all human effort to escape by flight—unless timely warning comes, which is almost impossible to expect. The climax comes too suddenly, and this is arrived at when there are sufficient smouldering and isolated fires burning in innumerable places during a dry time ready to be fanned into activity by the first strong wind. Rotten logs, stumps, dry vegetable matter, spruce bark, roots, are not the only inflammable substances. The Evergreen trees are loaded with resin and their needles charged with highly inflammable material. Every condition favorable to rapid combustion is here, and, a good start being made, fire quickly creates its own wind by using up the oxygen, causing an enormous rush of air increasing in volume and speed the larger the fire becomes, until the flames travel with incredible speed.

I well remember July of this year. My home was in the township of Glackmeyer, some five miles north of Cochrane. Every settler for miles around seemed to have thrown off all restraint in the matter of burning their slashings, and although it was after the middle of June, which is looked upon as the end of the lawful burning time, the lighting of punk and other dry material went gaily on every time it became dry enough to start easily, and by the middle of July fires burned and smouldered throughout the country. Occasionally one could see dense volumes of smoke rising high above the tree tops far and near as the breeze roused into life enough flame to catch the limbs of the green trees, which flared up to the top instantly and usually ignited a neighbor, dying out for want of wind to carry it on to another. These incipient fires occurred everywhere, in some cases running a considerable distance into the green bush from tree to tree, Spruce and Balsam burning as if steeped in oil, smoke of course being around every-

where, growing each day a little denser and at times obscuring the view beyond a few hundred yards.

The settler soon becomes used to this kind of thing, and it arouses little comment. The more observant, however, could not but notice the state of affairs as the memorable 29th approached. It was sometimes necessary to get past stretches of road on the gallop because of the dense smoke from fires burning above and below ground, occasionally culverts and corduroy portions of the road would catch fire and burn slowly considerable distances. Showers would quench but not extinguish; in fact, as soon as things dried after a rain a slight wind would soon prove the fire had taken even a better hold by attacking the roots underground, and the heart of decaying logs and stumps glowed with suppressed fire, bursting into flame with greater vigor immediately the wetted outside had dried.

On the fatal 29th of July I did not notice any particular difference in the atmospheric conditions, less smoke if anything, but towards noon the wind was blowing fairly strong from the west and the smoke was much thicker. My family, with the exception of one little girl, had gone to Cochrane, and I was speculating on the possibility of their getting back without trouble, but, when two o'clock came, felt sure they would not attempt to get through as the wind had greatly increased and the smoke was much worse; even in the house it was very unpleasant. Having a creek some few yards distant on the west of the house, I had made a dam so that plenty of water was always to be got above the dam.

Filling every receptacle and saturating all around the house and outbuildings, and soaking the logs with water as far as possible, there was not much danger from sparks, as the buildings were plastered with cement between the logs and the roofs were covered with a good felt. All around was green clover and no stumps, so that no fire could reach the house along the ground. The clearing was about twenty acres, including a "slashing" to the west, which had been burned in May but had got on fire some days ago and was burning at this time again. It was from this and a long log bridge on the road near, close to which six thousand feet of lumber was stacked, that danger threatened. By two o'clock the sun looked like a small, red ball, and the light had changed from yellow to deep orange and was greatly diminished. This was alarming, and I decided to go to a lake half a mile east, as the safest place, not knowing how much worse things might get.

Running over to the neighbor across the road, where there was a woman with five small children, and another nearby family, I endeavored to get them to come but they absolutely refused and with wonderful faith elected to stay, apparently assured of their safety. There was no time to lose if the lake was to be our refuge, so, telling them to get into the clover field if they had to leave the house, my little girl and I hastened to wet a towel and started along the road towards the lake. It was half past three, the wind was momentarily increasing in violence. Running with our backs to the wind we got only half way when the roar of the flames and burning stumps on each side of us compelled us to give up all idea of getting to the lake. We could see the bush a mass of flames, and the road ahead and behind us was beginning to burn where culverts and corduroy formed it. We got into an oat field which was yet green, but even here stumps were on fire. It was with the greatest difficulty we could find the direction towards a house on a hill. The wet towel proved its value and we got to the house, where several, including women and children, had taken refuge. Four men were busy running with pails of water, trying to keep the fire back, putting out burning stumps as fast as possible, but only to have others catch and fire break out in a dozen places around them. It was given up after another hour of blinding, suffocating work. The heat was intense, the hot wind furious, and could no longer be borne by the panting fire-fighters. From across the road, fifty rods or more, the green bush was a mass of flames and huge sheets appeared to be ripped off by the wind a hundred feet above the trees and hurled ahead, and a slight shift of wind brought one of these masses over our heads. A rush was made for the house; women and children bundled up, and, seizing a couple of big, grey blankets, all ran back some distance to a potato patch, dipping the blankets in a barrel of water in passing. Choking, blinded, parched and suffering from intense heat, the women and children fell in a heap amidst potato tops, and the wet blankets were quickly spread over them. There was not room for more than the men's heads underneath, but we managed to make a kind of tent which protected them to some extent from the flying sparks and strangling smoke. In half an hour the blankets were dry, but they had saved us so far from fire as well as smoke. The boards on a near-by fence became ignited and had to be kicked off and thrown farther away. Several stumps close by also caught fire and had to be smothered with loose earth and green tops, under great difficulty, for it was impossible to remain uncovered more than half a minute and almost impossible to open an eye, but each did his best. It is bad enough to hear the cries of suffering women and children, but to my mind the heart-breaking sobs of strong men is the most unnerving. Can you blame them?

Two brothers, bachelors, had for six years strenuously worked clearing their farm. At first undergoing great hardships, living in the bush, carrying everything they required five miles over a rough trail, not properly fed, suffering from cold, for they had no capital to buy comforts and had to get work to earn a grub stake, but brave of heart and strong of arm they had labored on for six years and this year they had seen the fruit of their labors. Good crops, oats, hay, roots in plenty to feed their small stock through the long winter. They

had everything they required and good buildings, including a large barn almost completed, and everything was paid for to the last cent. All was gone. Not an axe left of any use—and these men were no longer young!

There were many instances of this kind, but far worse ones. Cases of the most pathetic kind possible to conceive. A father returning to seek his wife and little ones finds them all charred corpses, huddled together in a small root-house which had fallen in on them, his home and every earthly possession for which he had struggled completely destroyed. A whole community who sought refuge in a railway cut, every one suffocated and most burned to a crisp. The soldier at the front suffers unspeakably in some cases before death comes to his relief, yet he dies for his country and kindred, giving his life for others.

Is the terrible unnecessary loss of life in this North Country to be in vain? Can such horrors ever again be enacted? I say they can and will be unless something is done, for there are still large tracts of country untouched by fire where settlers have already found homes. The country which was burned over last July is not all burned to such an extent that there remains no further danger.

Whose duty is it to find a remedy? Is the sacrifice of hundreds of lives to be for nothing, and settlers invited to take up land while the chances are so great that they amount almost to certainties, that in the future, be it near or far, another appalling fire will sweep the North Country again unless adequate preventive measures are taken. The settlers are warned to be careful with fire in the process of clearing the land. Anyone familiar with conditions in New Ontario knows that it is almost impossible to stop fire spreading if only one stump is fired in a dry time. Every root is a conductor, the earth itself is a mixture of fine "touch wood," dry vegetable matter and much besides that will burn. Digging may cut it off, but the first high wind soon fans it until it bursts into flame and sparks are carried to another spot, and in half an hour ten men could not stop it, and in a few hours an army of fire-fighters would be helpless.

Now is the time to study this question and formulate plans for prevention; not next spring or later. Next spring is the time to carry out preventive measures. The people of Northern Ontario look to the Government to move in this matter, and to formulate their plans for the protection of the settlers before the winter is past, and go ahead and do something before the dangers which another summer will bring, to those who so far have escaped, are turned into deadly realities.

New Ontario. H. W. PARSONS.

Clover Seed Production in Kenora District.

EDITOR "THE FARMER'S ADVOCATE":

About growing clover seed in the Kenora District a great deal might be written; however, it is not the writer's intention, in this short article, to treat the matter in detail but simply touch on a few of the most important phases of the work as carried on at the present time.

To begin with, an industry, or particular line of farming, carried on in any section, must have origin. Referring to the origination of the industry under discussion, it might be said, that it owes its very being to the keenness of vision and foresight of one of the early settlers, near Oxdrift, named Benjamin Brignall, who, being from Ontario County in the East, and having had some previous experience in the production of clover seed was quick to realize by the way the clover was growing along the roads and in the fields that the district possessed unlimited opportunities and possibilities undeveloped in this particular line. On account of it being located in a new country, free from weeds, and also far north it would be possible to produce an article of superior quality. At one time this settler was somewhat discouraged; but filled with new hopes and visions as a result of the excellent growth of clover he once more determined to succeed and commenced clearing land for the sole purpose of clover-seed production. Two years later Mr. Brignall had 10½ acres of red clover which yielded him 87 bushels or a little better than 8 bushels per acre. He had also ½ acre of alsike which yielded five bushels and 40 pounds, or better than 11 bushels per acre. Being the first producer of seed, quite naturally it fell to his lot to purchase the first clover huller. However, owing to the large increase in the production of seed this implement soon became a very paying investment and now it has been laid aside, and three other newer and more up-to-date hullers are doing work in the district, and pressing need exists for more of equal capacity.

When the large clover-seed fields became so prevalent, it dawned upon the Dryden Agricultural Society that this would be a good crop to use in connection with Standing Field Crop Competitions, and accordingly for the last three years a large number of entries have been made in this connection; and to quote the words of the judge this season. "This District has certainly any other beaten that I have ever seen for the production of clover seed, and just imagine, out of the 14 fields which I have judged, not a noxious weed has been found in any of them; it is something remarkable." This however, may seem a small item to the outsider; but to the careful and watchful farmer who is desirous of securing seed entirely free from noxious weed seeds and comparatively free from weed seeds of any sort it is of great moment.

While very little of the seed from this district has ever been shown in competition at either the Guelph or Ottawa Winter Fairs, nevertheless what was shown gave a good account of itself and was successful in winning first prize on alsike and third prize on red clover. These two samples were entered by Wm. Devoe, Oxdrift, and John Reid, Dryden, respectively.

This season a new addition has been added to the already successful record of the district, Frank Shapland of Minnitaki has been successful in the production of 140 pounds of Grimms alfalfa seed. This seed was grown in rows 30 inches apart, got no protection during the past winter and should prove to be very desirable seed for foundation stocks being, without doubt, doubly hardy owing to the Northern District in which it was grown.

Regarding the culture of the clover plant for seed production, there are so many and varied systems of rotations, methods of seeding out, etc., that space will not permit of a detailed description of each. Suffice it to state that the clover grows here very abundantly, and although termed a biennial by botanists has been known to live and thrive for many years. In some cases, individual plants have been selected out and after having survived three or four of our severe winters are still in a healthy condition. The soil is a heavy clay and it seems to be well adapted to the growth of the clover, plant and as we would naturally expect, owing to the fact that clover is a nitrogen-gathering plant, the land keeps improving, both mechanically and chemically the more crops of clover it produces. Surprising perhaps to many Eastern farmers the clover seed is produced, both in the case of red and alsike by the first crop. One system of turning the wild and woolly forest into a flourishing alsike field which some have practiced with good results might be summed up as follows:

Small timber chopped down (Jack Pine and Poplar), and stumps grubbed or blown out during summer of 1914; land broken same fall. In spring of 1915 land well-cultivated, and seeded to alsike about June 1st, without a nurse-crop. Nothing further was done until the harvesting of the crop 1916 which was certainly a credit to the owner.



Clearing the Land.

Field on Arthur Thomas' farm in Kenora district being prepared for growth of clover seed.

"He Can Who Thinks He Can."

EDITOR "THE FARMER'S ADVOCATE":

I wis lookin' through a Yankee magazine, that had happened tae come intae the hoose some way or ither, the past week, an' I cam' across an article wi' this for a title: "He can who thinks he can." The chap who wrote it made oot that gin a mon had faith in his ain abilities, an' will-power enuch tae keep him on the job, there was naething on this earth he couldna' accomplish. "Weel," says I tae mysel', "that's a pretty strong statement," an' I began tae think o' a' the inventors that hae tried tae bring aboot perpetual motion, an' tae mak' gold oot o' brass or money oot o' hens an' sae on, an' says I, "it will be juist as weel tae tak' that statement wi' a wee bit o' salt."

"On the ither hand," thinks I, "is there ony truth



Field of Alsike.

This crop is growing on the farm of Alex. Skene, north of Dryden in the Kenora District.

We come to one of the most important phases of the whole story, namely, marketing. Heretofore it has been the practice to sell all seed produced to speculators at or soon after threshing time. In 1913 a yield of 2,004 bushels was disposed of in this way. While this system of marketing gave fair satisfaction, yet its weak points were many. In the first place the identity of the seed was lost and hence Kenora District received none of the credit for producing same. Again, the price was too much below that paid by the Eastern farmer the following spring; and accordingly, owing to large increase in production and in order that better satisfaction might be had, and more harmony exist between the producer and consumer, as in this particular instance, they are both worthy tillers of the soil, the farmers of Kenora District have organized themselves into an organization known as, The Kenora District Co-operative Clover Seed Growers' Association, with head office at Oxdrift, and T. J. Latimer of Oxdrift, has been secured as Manager and Salesman. A large power Clipper cleaning mill has been purchased and installed and it is the intention of the Society to clean, grade and store their seed until sold in a retail manner to the Eastern and Western farmers of Canada.

Kenora District, Ont.

L. H. HANLAN,
District Representative.



Red Clover.

Field on Alex. Skene's farm north of Dryden.

in it gin we tak' it in the sense that it wis perhaps intended tae be taken? That is, that onything in reason can be accomplished by a mon who believes he can dae it, an' who pits his faith intae action." There's something tae be said for that side of the argument, na doot. We a' ken men who are a livin' proof of the fact that mair can be accomplished than we sometimes think possible, sae gin we are mistaken aboot possobeelities in one case who kens but we may be mistaken in ither. Onyway it's a caution what a mon can dae when he gets int e some kind o' a tight box or ither, an' has naebody tae help him oot but himsel'. I'm reminded juist noo o' a case o' this kind, an' gin ye dinna' mind I'll be tellin' ye hoo ony mon got up against it, an' in spite o' everythin' cam' oot on top in the end.

About a year ago a neebor o' mine got tae thinkin' aboot fixin' over his barns, raisin' them up aboot ten feet, an' pittin' stables underneath an' sae on. He had a couple o' boys tae help him wi' the wark, sae he thoct that by giein' a job o' the thing tae some contractor or carpenter it wouldna' interfere muckle wi' the regular wark o' the farm, an' a' he wad hae tae dae would be tae pit the building material on the ground an' pay for the job when it wis feenished. But things hae a habit o' warkin' oot different tae oor calculations, an' that's what happened in this case. One o' the boys, who had taken enuch Irish frae his feyther tae mak' a fighter oot o' him, enlisted in the King's army, an' that pit an end tae his wark on the farm, as ye may ken.

The next thing that happened, the contractor that had taken the job o' raisin' the barn got tae thinkin' that there wis gaein' tae be mair days than dollars in the undertaking, an' wi'oot sae muckle as sayin' good-bye he quit, an' has na' been seen since. Tae mak' matters warse, gin that were possible, the ither son, who had been makin' plans tae veesit the West for some time, had juist gone on his trip, an' there wis ma friend left alone wi' his barn, an' naebody in sight tae gie him a hand. But he didna' sit doon tae think aboot it for very lang. He started oot an' hunted up a sort o' half carpenter an' they went at it thegither. They moved aboot thirty feet o' the barn around tae the side o' the ither one, an' then raised it tae the same level. This wis no sma' job, an' while they were at it the carpenter fell frae one o' the upper beams, which pit him too

o' business naething fo trades an' I block found wis tae sae a' thegither a couple o' mortar they for the next I should tae get a' h barn that h wis gaein' o done some while he wis his neebors ower muckle would be at milk, an' it happened tae hame wi' a some kind. the rest o' this summer onything.

In the c tak' doon h no' tackle th but one day dressed lum "When can "Weel," say "I'll try an' I've mair o yersel'. Ar says I.

"Hoot y dae it, an' guid a mon could dae o Weel sir, too. The n drawin' grav tae tell ye th up complete. an' cement a there, some

I saw hin an' how are ony ploughi "gie me an her up. I g up the ould turmin' it ove "Ye're daei hereabouts they didna

We have different gar two weeks, a "What is yo "Overhaul jo of their mach of the motor however, too hauling done might mainta an inspection are convince overhauling a up in the f action, but t is not allowe permitted to soon as your an overhau during the h been allowed adequate car our advice, w work to a him with a sli connecting and bearings, connections, gear shift, g brake, propell ing gear and frame, body, ings, engine p and cut out, self starter lig battery dist coils, spark p wiring and co

These ite that is requi some details models, but to determine and what po be added. I you is the ide know definit have been m just what pit

o' business for the time being, at ony rate. There wis naething for it but tae hunt up anither Jack-o'-all-trades an' keep at it, which they did. It wis a cedar-block foundation he wis pittin' in, an' the next thing wis tae saw the blocks. It took about fifty cords a' thegither, but they got them sawed, an' aifter about a couple o' weeks o' drawin' sand an' lime an' mixin' mortar they had the walls up an' were lookin' roond for the next thing on the program.

I shouldna' forget tae say that ma friend had managed tae get a' his grain cut an' pit awa' in the pairt o' the barn that had been feenished first, while the ither wark wis gaein' on. I dinna ken how he did it, but it wis done some way. As they say, he must hae' done it while he wis restin'. I'm thinkin' it wis while some o' his neebors were restin' at ony rate. He didna' get ower muckle sleep, ye may pit yer money on that. He would be at the cheese factory before daylight wi' his milk, an' it didna' maitter what time o' the nicht ye happened tae be oot, ye were liable tae meet him comin' hame wi' a load o' lime or cement or buildin' stuff of some kind. Between drawing sand an' gravel an' a' the rest o' it, I'm thinkin' his horses will remember this summer as lang as it's in their nature tae remember onything.

In the course o' movin' the barn ma friend had to tak' doon his auld silo, an' thinks I tae mysel' "he'll no' tackle the buildin' o' a new silo this year onyway," but one day I met him on the road wi' a big load o' dressed lumber on his wagon an' he stopped an' says he: "When can ye come an' help me fill my silo, Sandy?" "Weel," says I, when I could get ma breath, "I guess I'll try an' go ony time ye're ready. I dinna' think I've mair on ma hands tae prevent me than ye hae yersel'. Are ye really gaein' tae build a silo this fall?" says I.

"Hoot yes," he replied. "The wife said I couldn't dae it, an' I'm gaein' tae show her that I'm juist as guid a mon as the one she married. She thoct I could dae onything in those days."

Weel sir, he pit up that silo, an' got his corn all in it too. The next day aifter he had finished filling, he wis drawin' gravel for his stable floors, an' I dinna' need tae tell ye that he got them a' in an' everything finished up complete. There wis mair gravel tae draw, an' sand an' cement an' lumber for stalls an' so on, but he got it there, some of it by daylight an' some of it aifter dark.

I saw him the ither day an' I says tae him, "Weel, an' how are ye comin' on? Hae ye made oot to dae ony ploughin' this fall?" "Hoot, Sandy," says he, "gie me anither week o' guid weather an' I'll finish her up. I got a wee laddie frae the toon an' I hitched up the ould mare an' the colt for him, an' we hae been turnin' it ower wi' twa teams for a couple o' weeks past." "Ye're daein' weel," I says. "I ken some farmers hereabouts that are na mair than started yet. An' they didna' build a barn this summer either," says I.

"Weel, Sandy," he replied, "it a' depends on how ye gae about a job, how ye're gaein' tae get along wi' it. Gin ye mak' up yer mind that ye'll see the thing through ye're gaein' to dae it, nine times oot o' ten. These chaps that are aye wonderin' whether it will be wise tae try to dae this or that on account o' the difficulty o' the undertaking never get onywhere I notice," says he.

"In ither words," I replied, "ye're sayin' what I read in a magazine yesterday. It wis this way: 'He can who thinks he can.'"

"That's richt," says he, giein' me a slap on the back. "Ye've hit the nail on the head this time Sandy, no mistak'."

"Weel, I guess I had tae borrow your hammer to dae it then," says I. SANDY FRASER.

"Only a Farmer."

EDITOR "THE FARMER'S ADVOCATE":

A phrase sometimes used by a farmer with reference to his vocation is: "Oh, I'm only a farmer"; or, "He is only a farmer." Why discount himself, or his calling? The cultivation of the soil is man's primal and proper work, his first, as it shall be his last. Without bread, the individual, the community, the nation would starve, or the world would have remained in a state of barbarism or have returned to chaos. The farmer is the bread-producer. Agriculture is, therefore, the basis of civilization,—it constitutes civilization. It is not only great and complex as an art and a science;—the farm is man's heaven-appointed sanctuary,—his religion and theology. He worshipped in the groves and fields before "temples made with hands" were built; he shall so worship as a re-constituted free child of nature, after man-built temples shall have crumbled to dust.

Farming makes possible and gives rise to all other pursuits of civilized and organized society. Without the tillage of the earth, man has been in all times and places a savage subsisting in the crudest manner, as an untamed creature.

Only a farmer! the being privileged, honored, exalted, endowed by his Maker with priority, freedom, sovereignty and power. Only a farmer!—"How art thou fallen!" Whom would there be to "fleece" without thee? Where would be the appointees to sumptuous and easy livings, the parasites and fake-scheme promoters, if thou wert not?—Oh where! Only a farmer!—The man who clears away the forests, upturns the virgin sod in vast prairie regions, erects fences and buildings, drains and cultivates the soil, produces the food of the world, pays taxes, supports a legion of non-producers, in addition to his own necessities;—the man who builds the highways, the home, the school, the church;—the man who is a large factor in establishing

and sustaining government, the nation, the throne,—only a farmer.

Who ever heard a lawyer refer to himself as "only a lawyer?" or a physician as "only a physician?" Are these raised above the farmer by higher intelligence, a broader or more technical culture? If so, then not necessarily so. The book of nature—a big book—is in an especial sense his text-book. It is ever open before him. It presents a field for observation, experiment, research and study quite sufficient for the best brain-power; and many are the "mute, inglorious Miltons", and Horace Greeleys among farmers. Kent Co., Ont. W. J. WAV.

The Lesson of Underdrainage.

EDITOR "THE FARMER'S ADVOCATE":

We are at the close of another year which, as with every previous year, has taught us some valuable lessons. It is not my object to discuss them in general, but I want to pick out the one subject, "tile drainage". First of all, in the spring, as we had a new drain in this year, nobody regrets of having put in drains especially in places with a heavy subsoil having little or no natural drainage. I experienced that: in the same mud hole, where, some years previous, the frogs held concerts all summer long, and which was drained, with the discouraging work of digging down nearly seven feet through hard pan and heavy clay to get enough fall, it was dry enough and fit for the drill before I could get in the rest of the field. However, the usefulness of the tile was not at an end with the end of the rainy weather. Where the superfluous water was taken away I noticed that there was a great difference in the crop. The ground did not cake and harden as in places that dried slowly and were puddled through with the cultivation and seeding implements.

Lastly I noticed that in plowing this fall the saving of time and horseflesh was, in a well-drained field, enough to pay for the tile. Put in more tile and save more money, prevent waste, get the old willow bunches out of the hollows, and, wherever possible to get an outlet drain them using precaution not to take too small tile. I never use tile smaller than three inches, except sometimes for short branches. A main drain with several branches into it ought to be at least four inches in diameter. Although small tile (as 2½ or even 2 inch) certainly are better than none but they are very likely to get clogged, especially where fall is limited and in quick sand or mucky soil. There are over 15,000 tile on the farm on which this is written and there is not one tile that has not paid for itself. Waterloo Co., Ont. J. K.

Note.—As a general thing it is not advisable to use smaller than three-inch tile even in short branches.—Ed.

Automobiles, Farm Machinery and Farm Motors.

The Overhaul Job.

We have visited a great many repair departments in different garages throughout the country in the past two weeks, and invariably the answer to the question "What is your particular class of work now?" has been "Overhaul jobs." Previously owners left the inspection of their machines to the very day when the condition of the motor absolutely demanded attention. A few, however, took time by the forelock and had their overhauling done each winter in order that their power plants might maintain a high average efficiency. Others secured an inspection just before the spring opened up. We are convinced that the proper method is to have the overhauling attended to just as soon as the car is laid up in the fall. There are many reasons for such an action, but the principle one is this, that the motor is not allowed to remain clogged and dirty and defects permitted to increase their injurious nature. If, as soon as your last mile has been run, the auto is given an overhaul at the hands of an expert, its condition during the winter will be much better than if it had been allowed to stay in storage without first receiving adequate care and attention. If you decide to take our advice, we would suggest that in turning over the work to a competent garage man that you present him with a slip with the following classifications: Motor, connecting rods, wrist pins, valves, cylinders, fan and bearings, oil pump and connections, water pump and connections, carburetor and connections, transmission, gear shift, guide and levers, clutch, foot brake, hand brake, propeller shaft, universal joints, differentials, steering gear and connections, radiator, wheels, tires, springs, frame, body, rear axle, front axle, bonnett and fastenings, engine pan, gasoline tank and connections muffler and cut out, mud guards, self starter, self starter clutches, self starter lighting wing, dynamo, generator distributor, battery distributor, storage battery, dry batteries, coils, spark plugs, voltage regulator, cut-out relay, wiring and connections.

These items should include practically everything that is required in an average car. In fact there are some details that will not be necessary for cheaper models, but it is going to be an easy matter for you to determine just where elimination should take place, and what points, if any, further classifications should be added. The main thing we wish to impress upon you is the idea that when the work is finished you will know definitely and positively just what mistakes have been made during your last driving season, and just what pitfalls it may be necessary for you to avoid

when you again put your machine into service. We would ask you also to go some steps farther, and after the mechanic has completed the job, pay him the minimum fee to disclose to you exact information as to the energy he has exercised on the various parts of your auto in order that they might be brought back to standard. The knowledge you receive may not be of any immediate value, but sooner or later it cannot fail to well repay you for any effort put forth in securing it. You must remember that in so far as accessories are concerned, the guarantee given by various companies generally includes some indication of points at which service can be secured. If you have had any trouble with an accessory, write the manufacturer direct, and find out who is responsible for keeping the part in perfect order. Some firms state positively that their guarantee ceases when a mechanic does any tampering with their product. Under these circumstances, it is the best policy to refrain from fixing any piece of automobile equipment that is so safe-guarded.

In this season of the year many salesrooms are visited by owners anxious to trade in their second-hand cars for new models, and these deals are frequently complicated by the fact that the person who desires a trade has allowed his auto to run down in every particular and has constantly avoided the spending of a single cent towards the maintenance of its appearance or performing abilities. If you intend to make a trade this year, we cannot too strongly urge that before you approach an automobile agent, you should know exactly what your car will do under all circumstances. Any money that you spend keeping the machine in perfect condition, will be the finest investment you ever made in your life. Cars are traded in under different circumstances, some dealers giving definite prices, others stating a price and promising the owner anything in addition that may be received, and still others take in the old machine for sale, and credit the amount received for it on the new car. You can readily understand that no matter what choice you may make, the result is going to be far more beneficial to you when the car is at the top notch of performance. In many instances the expenditure of \$25 or \$30 has resulted in an increase of from \$100 to \$200 on the sale price of a second-hand. Perhaps we cannot drive this home with greater force and effect than by stating that while the average individual approaches the purchase of a new car with confidence, it is also true by the same token, that the same average person views a second-hand deal with fear and discomfort. You know yourself that if anyone offered to sell you a used machine

and it failed, for any legitimate or illegitimate reason, to properly perform, you would be immediately doubtful of its value. A word to the wise is sufficient.

AUTO.

Sizing up an Engine.

The gasoline engine has proven its worth. It is as necessary to the farmer as his drill or binder, and instead of asking the question, "Is a gas engine a good investment?" or "Will it save me some money?" the progressive farmer to-day is asking "What points shall I look for? Which type shall I buy? Which will do the best work and last longest with a reasonable amount of intelligent care?"

We are dealing with small stationary engines and not tractors this time. There is scrub machinery and pure-bred machinery, just as there are scrub stallions and bulls as well as pure-bred, and each has its price, cost and value.

When you are wondering whether you will pay \$100 to \$125 for an engine, remember these three things—price, cost and value—and don't be misled by the initial payment, it may be the least of all your troubles.

Get an engine that appears well finished. You can size up a good horse, perhaps, as well as a professor, although you may not be able to give reasons, and you can size an engine up as well. Get a good ignition system, which requires no batteries but uses a magneto for starting as well as running. See that the carburetor is easily accessible and that the gasoline pipes are of sufficient size to be easily cleaned. The valves should be easily removed for grinding. The crank chamber should be dust proof—this is a point often found wanting in first-class makes. The engine must be balanced so that a uniform speed may be obtained. A dollar revolution counter will give you much valuable information about the running of your engine. The cylinder and cylinder head should be cast in one piece. When it is separate and has to be removed to grind the valves, much trouble is caused by getting the packing to fit. When head and cylinder are in one piece, the valves are seated in cages which can be easily removed and replaced. When you buy a horse you don't buy one that is only fit for the bone-yard, so when you buy an engine, you don't want one that is only fit for the scrap heap. Pay a reliable firm a fair price for a well-designed, carefully constructed engine.

Identification of Repair Parts.

After a man has spent years in the repair department of a large factory he becomes quite expert at filling very vague and indefinite repair orders. When a new man takes his place he has to spend much time solving these puzzles. Meanwhile much valuable time and money is lost both to the factory and to the customer. Delay is costly and annoying, and in nearly all cases a more explicit description of the part would have eliminated the trouble. Example, an order by telegram reads: "mail by express one sparker wheel." Repairs had been ordered by this customer before and so his engine number was found on referring to the records, still the shipper could not decide exactly what he wanted; the repair list contained no part of that name. Two solutions were possible, (1) a roller, which was part of the igniter; (2) a roller, which was part of the magneto with which this engine was equipped as the office record showed. Many people call both magnetos and igniters sparkers. They were cheap parts and he might have sent both and probably got into trouble at the same

time. He took the safe course and wired, "Give number from your repair list." This cost the company 85 cents as also did the reply which read, "Mail roller six five for engine two three six nine." This identified the engine and the part correctly. The customer in this case, as in hundreds of similar ones, could have saved time and money. Cases like this make people say the farmer is a poor business man.

Another man wrote saying how delighted he was with his engine, and ordering at the same time a new exhaust valve. The repair list accompanying his engine had at the foot of every page, "Give engine number when ordering repairs." He might have bought the engine from a local dealer now out of the business, and, therefore, no record of the transaction could be found at the factory. The company probably made several tractors of all sizes as well as portable and stationary types. Besides this remember that new models are put on the market from time to time.

What do the factories consider adequate information? They must have two things, if they have these the repair

can be furnished promptly or else their system is at fault. First, they require the serial number of the engine. This determines the size, type, date of manufacture, etc. Second, the particular part should be identified beyond the shadow of a doubt from the repair list number or by a sketch of the broken part. Suppose a cam was required; it could be laid on a sheet of paper and drawn around with a pencil and with the engine number it could be procured.

Remember that your engine is one out of thousands, and that changes and improvements are being made almost every year, so that efficient repair service is a very complicated problem at the best.

With smaller farm implements the problem is simplified to a large extent by the fact the local dealers usually carry a large stock of repairs. A man drives to town with the broken part and has it replaced with no trouble. With threshing machinery much precious time is lost every fall through downright carelessness. Remember it is very easy to blame the other fellow, but is it always his fault?

Canada's Young Farmers and Future Leaders.

Topics for Discussion.

Each week we shall announce topics for discussion in this department. A start was made last issue. Four topics will appear each week during the winter season, with the dates upon which manuscript must be in our hands. Readers are invited to discuss one or more topics as they see fit. All articles published will be paid for in cash at a liberal rate. Make this department the best in the paper. This is the boys' and young man's opportunity. Here are the topics:

1. The Literary Society.

This is a big and important question. Every community should have such an organization but many haven't. Tell readers of its value. Explain how it is managed and methods used in starting it as well as how interest is maintained. Do you have debates? Are short addresses successful? There is room in this subject for the expression of new ideas. Get copy here by December 9 for this topic.

2. The Farmer's Club.

This is a topic for many of our readers. What was said about the Literary Society applies to this topic. Outline the organization, the operation and benefits of the Farmer's Club in your community. Give suggestions as to its improvement. Copy should be in our hands by December 16.

3. Field Crop Competitions.

This is a big subject and one in which hundreds of our young men are interested. Tell us frankly what you think of field crop competitions, the rules, the judging, the effect upon crop production. If any improvements are necessary suggest them. Copy should reach us not later than December 23.

4. What is Wrong With the Community?

Discuss social, financial and other problems from a community viewpoint. Why have so many young people left the land? Why does almost every boy tire of his rural surroundings at some time in his early life? Is there a lack of proper social intercourse? Is there a lack of co-operation between the different members of the community? What is wrong? What is the remedy? Articles on this topic should reach this office by December 30.

How Many Birds do You Know?

EDITOR "THE FARMER'S ADVOCATE":

One of the several opportunities offered to farmers' sons to a far greater extent than to their city cousins is that of becoming acquainted with the birds of their country, and yet how very few do we find who are availing themselves of that opportunity. Thomas McIlwraith, in his "Birds of Ontario," describes three hundred and seventeen wild birds that have been seen in this province, and yet it can safely be said that only a very small percentage of the boys who live in the country can write out a list of fifty of our birds that they can name properly and identify in one way or another. To be sure, a great number of the three hundred and seventeen birds listed in Mr. McIlwraith's book are rare visitors in this province, but there are over two hundred that are either permanent residents, regular summer visitors, or pass through the province on their spring or fall migrations.

Books giving illustrations and descriptions of most of our wild birds can be obtained for a comparatively small amount of money, and with their aid even a novice in the study of ornithology can identify the majority of the birds that he may see. From them will be learned that a Great Blue Heron is not a crane, that all hawks are not chicken hawks, and that there is in reality no such thing as a "grey bird." A good plan is to keep a list of the birds seen in a year, and by comparing the lists from year to year, one can find out just what birds live in his locality and what are visitors. By recording the dates on which the birds are first seen one can easily tell what birds to look for at a certain time. At first the beginner will find that there are many birds he cannot identify readily, because of the fact that he has been

unable to see them plainly, but as time goes on he will learn to distinguish the majority of them either by their markings and colorings, their habits of flight, their songs or their individual peculiarities. He will know when he hears a shrill, plaintive "Oh dear, Canada, Canada, Canada," that it is a White-throated Sparrow that is advertising his summer home, he will learn that the members of the Woodpecker family fly "steady by jerks," and that the bird that teeters up and down on the shores of the ponds or creeks as if it were not evenly balanced, is a Spotted Sandpiper.

The busy seasons of the student of birds are the spring and fall migrations. By now most of our summer residents have flown south, but there are still enough birds left to provide interesting study for any boy who cares to watch them. Even in winter-time there are several different birds to be seen besides the omnipresent English Sparrow. A handful or so of poor grain or table scraps put regularly in a certain place will soon attract many of our winter residents, and anyone who takes the pains to do this will find that, like Freckles of the Limberlost, the pleasure they get from watching the birds will more than repay them for the slight trouble they have taken.

Halton Co., Ont.

F. B. H.

Experimenting With Farm Crops.

EDITOR "THE FARMER'S ADVOCATE":

Would the world be in the position it is in to-day if it were not for the different experiments that have been carried on down through the ages? We would have no telephones, steam engines, automobiles, aeroplanes, and the numerous other inventions which have brought the trade and commerce of the world to its present advanced state, and then we hardly dare think of the many improvements which may come in the next hundred years, due entirely to experimenting.

To succeed, the farmer must experiment as well as any other businessman. Thanks to our District Representative, I was this year persuaded to make some tests and the information I received paid me well. I experimented with nine different kinds of oats, seven different kinds of corn, four different kinds of spring wheat, three different kinds of barley, two kinds of spring rye, two kinds of buckwheat, three varieties of beans, and two of alfalfa. Besides this I had an experiment with thin and thick sowing of oats.

As this was a very busy summer and help was scarce along about harvest time, I did not get the weighed-up results of all the different kinds I tried, but the eye when practiced is nearly as sure as the scales, and even if I didn't get weight by pound I have my own ideas as to which is the best and which will do the best on soil in this locality.

The first experiment I mentioned was oats. For trial, I had O. A. C. No. 72, O. A. C. No. 3, Banner, Siberian, Abundance, Daubeney, Storm King, Early Dawson, (white oats), Joannette, and Pioneer (black oats). The first three mentioned were put in plots one rod by two each, then the rows were about eight inches apart. They were all hoed three times during the summer, and kept as clean as possible, giving them as much chance as possible to do well. The other seven varieties mentioned were put in two rows, each one rod long. Of the first three the O. A. C. No. 72 had by far the greatest bulk of straw, although in yield the Banner surpassed them. The O. A. C. No. 72 were also a little more inclined to rust and lodge than the Banner. However, for straw, the O. A. C. No. 72 had the Banner beaten. The O. A. C. No. 3 are not a heavy strawed oat, or not a heavy yielder, but they fill the bill for which they were originated, namely, an early oat to ripen with barley, this they did, maturing in exactly the same number of days as the No. 21 barley. This was certainly information worth having, but the chief feature of the O. A. C. No. 3 was their beautiful appearance. Right from the time they came up until they were threshed, there wasn't another kind of oats could touch them for general appearance. They all grew just the same and when ready to harvest were just as level on top of the plot as if they had been trimmed. The straw was also as white as if they had been bleached. The grain presents a good appearance after being

threshed, but they will not fill the mow or granary as fast as the other two varieties.

The other varieties I tried more for their stooled qualities. The Siberian was a very good stooled, something similar to the O. A. C. No. 72, in fact you could trace the relation between the two oats. The Abundance was a very poor stooled and when sowed at the same quantity of grain per acre as the others, proved a light crop. The Daubeney was a good stooled, an early oat, and the relationship between it and the O. A. C. No. 3, could be easily traced. The Storm and Early Dawson were both, in my estimation, poor oats, light yielders and very heavy in the hull. When I sowed the two kinds of black oats, I was told one was very good and the other very common. This I found out, the Joannette being a very good yielder with a thin hull, while the Pioneer was a coarse, short-strawed oat, a poor yielder with a heavy, thick hull.

In the corn I had seven varieties. I tried this experiment out last year and the results were comparatively the same, although I had a heavier crop this year than last. The results were as follows:

Kind	Lbs. silage	Lbs. husked corn
Bailey.....	48	12
White Cap.....	49 1/2	13 1/2
Golden Glow.....	56 1/2	19 1/2
Wisconsin No. 7.....	45	18
Longfellow.....	42	13
Saltzers North Dakota.....	43	11
Comptons Early.....	43	12

In weighing this corn the same number of stalks of each were weighed and husked, and in selecting, as nearly an average of each variety as I could get, was taken.

The spring wheat was something new to me. We never tried to grow it before. For varieties I had Marquis, Colorado, Wild Goose and Polish wheat. On account of the lateness and wetness of the spring, the wheat was late maturing. Wild Goose gave the best results, Colorado came second, Marquis third and Polish last. The Polish wheat was a great curiosity in this part of the country, and created a great deal of interest among the people who visited the plots during the summer.

The barley I tested out was of some interest, O. A. C. No. 21 giving the best results, California Brewing barley came next and Guy Mayle (a hullless barley) came third. The O. A. C. No. 21 took the longest of the three to mature, being three days later than California Brewing, and two days later than Guy Mayle. The O. A. C. No. 21 barley matured in the same number of days as No. 3 oats. These two varieties would make an extra good mixture for mixed grains.

The Ontario Agricultural College has originated a variety of spring rye which they advocated as a splendid yielder, and the grain is of extra quality. I tried out O. A. C. No. 61 spring rye and common spring rye. My plots were one rod by two rods and I must say the O. A. C. No. 61 is a good variety. It will yield nearly half as much again as the common spring rye, and the grain is much superior. I think that it could be profitably sown with O. A. C. No. 21 barley and O. A. C. No. 3 oats as a mixed grain crop, as the time for maturity is nearly the same, there being only a day or so difference and I do think that the grain would be valuable for hog feed.

I had two different kinds of Buckwheat, Rye Buckwheat, and Silver Hull. Personally I liked the Silver Hull. It probably would not turn out as well but the appearance of the grain was much better. It also grew up taller and was much easier to harvest. As for beans, I had Pearce's Improved Tree Beans, Yellow Eyed beans, and Common tree beans. Pearce's Improved Tree beans were my favorite, Yellow Eyed beans were second and Common pea beans third. I liked Pearce's Improved Tree variety because they grew up well and the pods were very seldom on the ground.

For alfalfa I had Grimms Variegated and Northern

Grown. Of although No

This end experiment, seeding. I and a half sowed to gra the acre, th about four the hills I p in some. T widths from two feet. O the best qua eight inches

Where it w straw was lig so by this I best.

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EDITOR "THE

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There is o carefully cons the price of d suming public we are throuou products hav value as comp that when the low prices, th it would seem of danger in fo convinced that are maintained supplied with reasonable pr be commended in either direc of supply and its products ar development o possible, he in nomics.

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In many dis for milk during to May dairy which to dispo closed during vogue. The co so that the bu local market, s sets in the cows dairying is mo instead of whol ing cream are g is about as re butter. It do combination of market of dair Between season but some conti to gather, etc skim clean, an these annoyanc care in looking the cream.

It is tantalia when the butte and it is equal minutes and be sary to get it ro move the caus several things. the most frequ cows well adv fat globules wh temperature. ing a fresh co system of feeo butter-fat, whic than the fat p creasing the su an improvement

Grown. Of course Grimms Variegated was first, although Northern Grown proved very good.

This ended the different varieties of grain under experiment, but I had another one on thin and thick seeding. I had a piece of ground probably two rods and a half long, by one rod wide. About half this I sowed to grain at the rate of about five bushels to the acre, then part of what was left I sowed in hills about fourteen inches apart each way. In some of the hills I put four kernels, and as high as eighteen in some. Then I sowed some in rows at different widths from each other. They ran from six inches to two feet. Out of all the experiments the grain was the best quality in the rows that were sown about eight inches apart.

Where it was sown so thick it was poorly headed, the straw was light and it lodged badly before it was ripe, so by this I might suggest that ordinary seeding is best.

The plots made considerable work, but the information I gained well repaid me for my trouble. I believe that the best way to find out anything is to get it for yourself and then it will stay with you.

Middlesex Co., Ont. ARCHIE D. LIMON.

THE DAIRY.

Keep the Dairy Business on a Safe Basis.

EDITOR "THE FARMER'S ADVOCATE":

I was much pleased with your very comprehensive and well-reasoned editorial in Nov. 9th issue of "The Farmer's Advocate".

I agree with your answer to all three questions propounded in the body of the article. We, in Canada, cannot afford to risk jeopardizing the dairy industry by allowing imitation butter entrance to the Canadian market.

There is one point, however, our dairymen should carefully consider. Is it a wise policy to advance the price of dairy goods to such a point that the consuming public begin to look for substitutes? While we are thoroughly convinced that in the past, dairy products have been selling below their actual food value as compared with other food products, and also that when there is an opportunity to make up for past low prices, there is a great temptation to do so, yet it would seem to the writer as if there is an element of danger in forcing prices too high. Personally, we are convinced that if the prices for milk, butter, and cheese are maintained at a good point, and if the people are supplied with a first-class article at a price that allows reasonable profit, this method of procedure is to be commended, rather than one of extreme prices in either direction. While we are aware of the law of supply and demand in its effect on prices, milk and its products are so essential for the physical and mental development of a nation, that they should, so far as possible, be independent of this cast-iron law of economics.

All dairymen will support your policy of keeping the dairy industry free from such unfair competition, as will ensue the moment that "Oleo" is allowed entrance to Canada.

O. A. C., Guelph.

H. H. DEAN.

Overcoming Difficulties in Churning.

In many districts the cheese factory affords a market for milk during the summer months, but from November to May dairymen must seek other avenues through which to dispose of this product. Where factories are closed during the winter, summer dairying is most in vogue. The cows are bred to freshen early in the spring so that the bulk of the milk can be disposed of to the local market, consequently by the time cold weather sets in the cows are not giving a very large flow. Winter dairying is more generally followed where the cream instead of whole milk is sold. The facilities for marketing cream are good, and the price paid by the creameries is about as remunerative as selling it in the form of butter. It does away with a lot of hard work. A combination of circumstances has largely robbed the market of dairy butter, especially during the summer. Between seasons many factory patrons make butter, but some continually have trouble in getting the butter to gather, etc. Others find that the separator does not skim clean, and gives more or less trouble. Many of these annoyances can be overcome by a little extra care in looking after the separator, and properly ripening the cream.

It is tantalizing to have to churn for an hour or more when the butter should gather in about twenty minutes, and it is equally aggravating to have it come in a few minutes and be so soft that considerable work is necessary to get it ready for printing. The solution is to remove the cause. The trouble may be attributed to several things. Having the cream or churn too cold is the most frequent cause. Another is that cream from cows well advanced in the lactation period contains fat globules which are small and require a high churning temperature. The trouble is usually alleviated by having a fresh cow or two in the herd. Sometimes the system of feeding is to blame. Dry feed produces butter-fat, which requires a higher churning temperature than the fat produced under summer conditions. Increasing the succulency of the ration frequently makes an improvement. Silage, roots and oil cake added to

the ration of hay and straw aid in making churning easier. The fat globules of the cream are gathered together by concussion. If the churn is too full, the butter is not likely to gather readily and there is not a complete separation of the fat from the buttermilk. A churn should not be over half full, and better results are attained by only filling it about one-third. Having too much milk in the cream also has a tendency to make churning difficult. By turning the cream screw of the separator a thicker cream can be secured. If the long can or flat pan is used, care should be taken to skim them close. Possibly it will pay to leave them set a little longer. There is always a loss of fat when churning poor cream. It is advisable to have cream testing around thirty per cent. butter-fat. There is no harm in having it a few degrees richer. The richer the cream the more skim-milk is retained, and the less bulk there is to ship if cream is sold. There is a possibility of having the cream so rich that there will be no concussion in the churn. This difficulty is easily remedied by adding water at churning temperature. Frequently the cream foams up and almost fills the churn. This condition is due to the presence of gas-producing ferments, accentuated by cold or low fat content. The addition of a little water at ten degrees above churning temperature, or a handful of salt, will usually relieve the situation. Yeast-producing organisms sometimes get into the cream and cause trouble. Practically all churning difficulties are overcome by pasteurizing the cream and using a pure culture to ripen it.

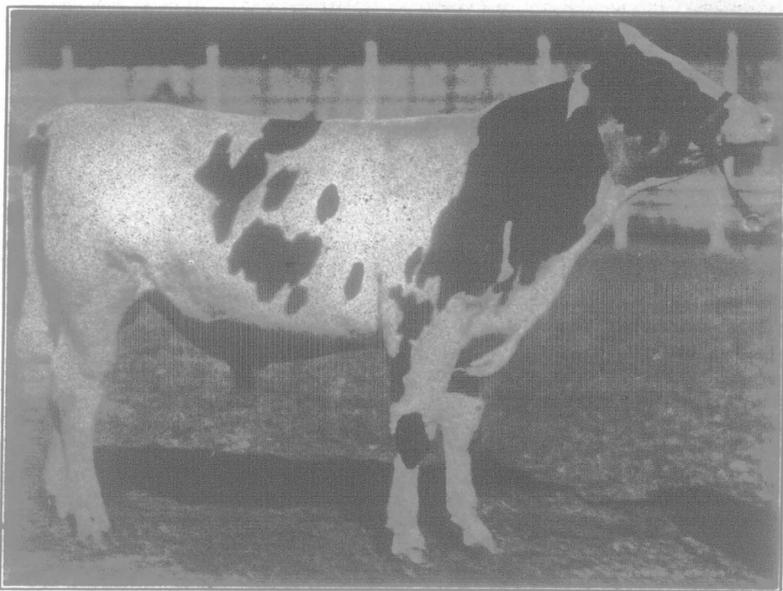
If the separator is in the stable, the cream should be removed to the cellar or milk-house immediately the separating is finished, as warm cream will absorb odors. It is a mistake to mix warm cream with previous milkings; first cool it to about fifty degrees. In cold cream bacteria are dormant, but warm cream starts them growing and multiplying. It is not enough to allow the cream to cool gradually, cold water or ice should be used and so check any bacteria the fresh cream might contain. The cream for churning should all be mixed together at least twelve hours before churning. This produces a uniform ripeness and gives uniform results in churning. Adding new cream to that which is ripened causes a loss of fat. Greater care of cream is necessary, not only for home dairying but when shipping to a creamery.

heat the cream a little more for next churning. The cream should always be strained into the churn in order to remove any lumps of curd. Coloring is added to the cream in the churn, but if it is forgotten it may be mixed with the salt and thoroughly worked into the butter. When the butter gathers, draw the buttermilk off and wash the butter; then work it to expel as much of the buttermilk and moisture as possible before salting. Poor quality cream and carelessness in handling it are frequent causes of difficulty in churning, and bad flavored butter. The dairyman has direct control over these things, and the aim should always be to produce cream of the best quality, then neither he nor the butter manufacturer will have much difficulty in placing on the market butter of the highest grade.

The Bull Requires Ample and Regular Exercise.

In order that a bull may maintain his health, virility and prepotency, it is necessary that he receive regular exercise. Too often this essential item in the care of the head of the herd is neglected, resulting in serious loss, due to failure to get calves, or having calves come weak. It is not an easy matter to provide a means of exercise for an aged bull that has become cross. When turned loose he is often inclined to tear things to pieces, and it is seldom that the attendant can find time to lead him about every day. A bull often becomes cross and hard to manage by not being properly handled when a calf. He should be halter broken when young, and always made to recognize man as his master. Stalls, fences and method of tying should be strong, so that he will not learn how to break loose. If he breaks the stall down or gets away from the attendant once, he is harder to control afterwards and appears to be always on the watch for an opportunity to break loose. A box stall with a paddock adjoining makes ideal quarters for either young or old bulls; the chief trouble being that they are oftentimes difficult to catch when wanted. During the summer the door of the stall may be left open and the bull can exercise in the paddock at will, or else lie in his stall. We have seen the same system used to allow the bull to take exercise during the winter.

A strong swing door closes the opening between stall and yard, and keeps the cold from entering the stable. The animal soon becomes accustomed to opening the door and taking exercise when he feels like it. If allowing the bull to run loose is not feasible, owing to the difficulty in catching him, a cable may be stretched from the stall to the end of the paddock and the bull attached to it by a sliding chain. He will walk up and down the paddock, which is better than allowing him to be continually tied in a stall. The fresh air aids in keeping up his vigor. If a yard is not available, keep him in a box stall and attach a light rope to the ring in his nose. Run the rope through a small pulley, fastened to the ceiling above the manger, and tie a light weight on the end. In this



Prince Bonheur Abbekerk.

Junior champion Holstein bull at Toronto. Owned by A. E. Hulet, Norwich, Ont.

Many dairymen lose dollars by not taking proper care of this product. Unless the raw material is looked after, the manufacturer cannot make a high-class article, consequently the producer suffers in the end. No creameryman can make butter, which will command the highest price, from poor quality cream. This also applies to the farm dairy.

In creameries the cream is pasteurized in order that a uniform quality of butter may be made from day to day from the different qualities of cream gathered. When the cream is properly looked after this process is not essential on the farm. However, it tends to overcome difficulties in churning and "off" flavors in the butter. It also adds to the keeping qualities of the butter. Pasteurizing milk or cream is not a difficult process. Place the cream can in a vessel containing hot water and gradually bring the temperature up to about 175 degrees Fahrenheit. Hold it at this temperature for twenty minutes, then cool rapidly to around fifty degrees. Add a culture to ripen the cream for churning. The receptacle should not be kept in too cold a place during the winter, nor too warm a place in summer.

Having the cream properly ripened, it should be heated to churning temperature, which is around fifty degrees in summer and from five to ten degrees higher in winter. The use of a thermometer is the only accurate method of determining the temperature. There is really no standard, as the richness of the cream, the size and temperature of the churn, and feed of the cows are influencing factors. Aim at having the butter come firm in about twenty-five minutes. If it takes much longer,

way the bull can move around the stall but may easily be caught at any time. The purpose of the weight is to take up slack rope as he approaches the manger, so that there is no danger of becoming entangled. Where several bulls are kept, long, narrow yards are found to be serviceable. A strong fence separates them, and the bulls walk fore and back for hours at a time. This might not work with only one animal. Some stockmen exercise the bull by using him on a tread power to do useful work. Regular exercise by some means is essential if the bull is to be kept at his best.

The ration for a bull in full service is similar to that of a cow in milk, except that less silage is advisable. Legume hay, a small amount of silage, and plenty of roots make up the roughage and succulent portion of the ration. Six or eight pounds of concentrates daily, supplying a fair amount of protein, should be sufficient. If idle, the concentrates could be reduced. It is a mistake to neglect the sire in any way, as the improvement of the herd depends largely on him.

In 1900 the output of oleomargarine in the United States was 107,045,028 lbs. In 1915 it was 145,468,730 lbs. Let the white stuff into Canada and in a short time the colored would come too, butter's trade mark would be stolen, trade disrupted, cows sold, fertility would fall, and prices of something else would go up to the consumer, to say nothing of the difficulties of legislating to control it.

Have the Cream Separator on a Solid Base.

The old method of creaming milk by the use of shallow or deep pans has given place to the use of centrifugal machines. This new method has many advantages, chief of which are an almost complete separation of fat from the milk, a good quality cream, less labor, and a supply of warm skim-milk for feeding hogs and calves. However, the machines require attention in order that they may give the best satisfaction. It is essential that the separator be level and set on a solid base. It cannot be expected to give satisfaction if the floor is springy. A concrete base is preferable, and if wooden blocks are imbedded in the cement when building it, the machine can easily be securely fastened down and there will be little danger of it getting out of plumb or loose. One of the first indications that the machine is not level is a quivering when turning. This trouble may also be caused by the bearings being too tight, or the spindle of the bowl being slightly bent. However, having the machine set on a poor foundation is a forerunner of considerable trouble.

There are several things which might happen to cause a variation from day to day in the amount and percentage fat of the cream from the same weight of milk. Separating the milk with the same machine, at the same speed, day after day, does not guarantee a uniform test, as many things may transpire to cause a variation. Increasing the speed above normal tends to increase the percentage of fat in the cream and decrease the weight; while decreased speed lessens the percentage of fat and increases the number of pounds. Feeding the milk into the machine too slowly, having the milk below normal temperature, or the cream outlet too small, will have a tendency to cause a thick cream. Feeding the milk too fast, or clogged skim-milk tubes, causes thin cream. A fairly uniform product can be secured day after day by properly adjusting the cream screw and endeavoring to do the separating when the milk is at a certain temperature, and with the machine turned at a uniform speed. Cream appearing on the skim-milk, after standing a few hours, may be due to cold milk, insufficient speed, and the machine not being on a firm foundation. However, with the best separator made and the taking of every precaution, the percentage fat in the cream will vary more or less from day to day, as it is almost impossible to perfectly control all the factors which cause the variation.

For convenience the separator should be in or near the stable. If there is no special milk-house a room can be partitioned off in some part of the stable, and if properly constructed it can be made sanitary. It should be kept clean and well ventilated, otherwise there is danger of particles of dust or dirt falling into the milk while it is being separated, and any foul odor will be absorbed by warm milk. Care should be taken to keep the separator and its surroundings clean at all times. Unless this is done the highest grade cream cannot be produced.

Student from Rhode Island College Wins Highest Honors.

The Students' Judging Contest is an educative and interesting feature each year of the National Dairy Show. At Springfield, eighteen State Agricultural Colleges were each represented by a team of three students. The results show that H. H. Hawes, of the Rhode Island State College, won the highest honors for judging all breeds of dairy cattle in the contest. With this honor Mr. Hawes secures a gold medal donated by the National Dairy Show Association, and a four-hundred-dollar scholarship given by the De Laval Separator Company. This student received his training from R. B. Cooley, a 1910 graduate of the Ontario Agricultural College, Guelph, Professor of Animal Husbandry at the Rhode Island State College.

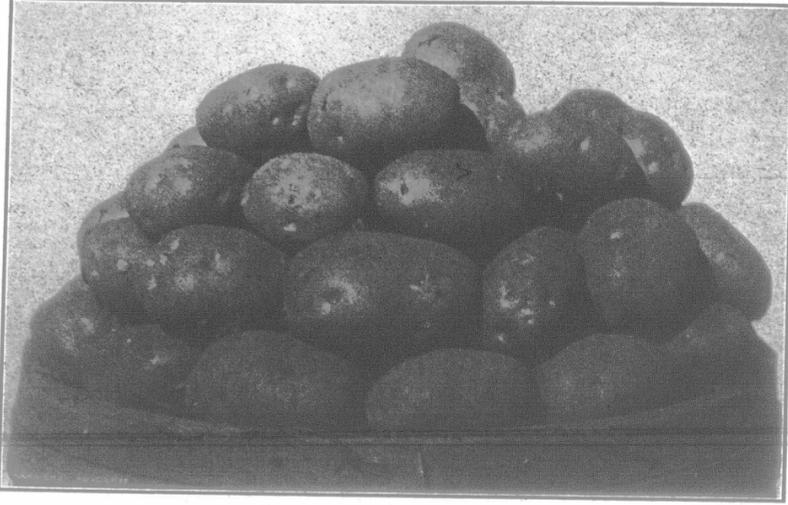
HORTICULTURE.

How Potatoes are Grown in the Province of New Brunswick.

The caprices of Nature, with regard to weather these last two seasons have forced upon us considerable respect for that underground-growing tuber, known as the potato. Perhaps the caprices of some speculators have had something to do with our growing admiration for the tuber, for at time of writing a Toronto daily paper carries an item to the effect that 110 carloads of potatoes stand unopened on the G. T. R. terminals in that city. The respect of the consuming public for a good mealy potato far surpasses that for a dealer or speculator who will corner a season's crop and even allow a portion of it to spoil in order to extort exorbitant prices from the people who can least afford to pay them. Be that as it may, there are few enough potatoes this year to go round, even under the best system of distribution, and the householder with several bags in the cellar can chalk up one good reason for being happy. There are many farmers in Ontario this year who did not lift as many potatoes as they put into the ground as seed last spring, and there are not a few who had none at all to dig. They, like the urban dweller, are buying potatoes, a common source of which are the Green Mountain, Empire State, and Irish Cobbler fields of the Province of New Brunswick. Nova Scotia grows potatoes largely for the West Indies. Prince Edward Island grows them for Newfoundland, local

markets and some United States cities in the East; while the New Brunswick Green Mountain is a well-known tuber in Ontario.

This great source of Green Mountains is not a potato-growing province as a whole, but some districts are so well adapted for the crop, and the production of this tuber is so well developed there, that we often think of New Brunswick generally as headquarters for potatoes, when, in fact the great bulk comes from Carleton, the banner potato county, Victoria, York, Westmorland and Kent. Lumbering is still a great industry; much labor and capital are annually employed in fishing, and on the east side of Kent County is a small fishing town whence we get the famous Richibucto oysters. A considerable part of New Brunswick farming is conducted in the fertile and pleasant St. John Valley, a district which will in subsequent years, we believe, come to be known as one of Canada's garden spots.



The Well-known Green Mountain Variety.

The Potato Growing Industry.

Different provinces usually follow methods of their own with regard to production. They may differ in details only, but the grower who has a knowledge of the several systems and constructs one for himself, using local conditions as a foundation and making his framework out of ideas gathered here and there, has nine chances out of ten of making a success. C. Fred. Fawcett, of Westmorland County, New Brunswick, did this, and the district in which he lives is now more prosperous on account of the good seed introduced and the methods he advocated. After a term at the Agricultural College at Guelph, Mr. Fawcett saw possibilities in Westmorland County farms. He argued thus with his neighbors: if these fields that have been long in grass and producing little were broken up, and a proper system of rotation followed, the run-down farms could be reclaimed without the use of barnyard manure. They should be planted the first year to potatoes and the soil enriched with commercial fertilizer. The next year sow grain and a seeding of clover. One year in grass completes the rotation and may be followed again by potatoes. This was his theory, and by successfully practicing it himself, he proved his contentions to be right. That was sufficient. To-day many erstwhile idle fields are growing profitable crops of potatoes, grain and hay, because of a system that made good.

The effort to establish some suitable method of farming their lands was accompanied by the acquisition and breeding of good seed potatoes, which were distributed in the neighborhood. Mr. Fawcett has been breeding potatoes for seven years, and has now developed

pure Green Mountains and Irish Cobblers according to the rules of the Canadian Seed Growers' Association, originating at the same time a variety which he named "Pioneer Pride." This is a selection from about 300 new varieties derived from potato bulbs, which are often seen growing on the vines. Out of 300 so started, this was the only one of any use. It requires three years to mature a seedling from this source, and though started in 1910 not until 1913 did this new potato show the possibilities wrapped up in it. In appearance it is much like the Empire State; it is also a heavy cropper. On the last day of September the writer visited this potato enthusiast, and had the opportunity of seeing how the Green Mountain and Irish Cobblers yield when well cared for under New Brunswick conditions. In the breeding plot on the farm mentioned several hills were pulled, and one hill of Irish Cobblers had in it eighteen potatoes; fourteen were large and four were of medium size. One hill of Green Mountains revealed seventeen good specimens, and another, fifteen. Good seed, a system of rotation, and good cultural methods are doing much for the potato-growing industry of Westmorland County.

Methods in Westmorland County.

When discussing potato-growing methods in Westmorland County, we are describing quite fully conditions that exist throughout the Province of New Brunswick. There might be slight local differences and some exceptions, but in such cases they would be the application of the same ideas, only perhaps applied on a more extensive scale. As before stated, potatoes are planted chiefly on a clover sod. This is

plowed down, preferably in the fall, about five inches deep, and in the spring it is disked and harrowed with a spring-tooth harrow so as not to disturb the sod. It has been found that with a three-year rotation and clover as one of the items in that system, that potatoes can be grown without the use of barnyard manure. However, a liberal application of commercial fertilizer is used and applied in the drill when the potatoes are planted. As much as one-half ton per acre or more is applied, sometimes less, but the feeling has become more widespread that the small dabs of commercial fertilizer do not pay and that the heavier applications will result in a greater profit per acre. Much of this commercial fertilizer is mixed by the growers. The ingredients used by them are nitrate of soda, acid phosphate, basic slag, and muriate of potash when obtainable. This year some wood ashes were used to supply potash without any apparent injurious effects. The percentages desired in a good potato mixture are four per cent. nitrogen, eight or ten per cent. of phosphoric acid, and five per cent. of potash.

The machine planter is in general use. The rows are about thirty-two inches apart, and an endeavor is made to have the sets dropped about fourteen inches apart in the row. This requires about five barrels of seed to the acre. An attempt is also made to have from two to four eyes on each set; at least two are required. Some seed is treated for scab, but the practice is not general in Westmorland County.

Where potatoes are grown on a large scale a hand hoe is not used, but a horse hoe, the important part of which consists of two shares converging slightly at the back, is a common implement. The practice is to kill as many



A New Brunswick Potato Gang and Digging Outfit.

weeds as possible this end in view. hoe shortly after down with a as the young is run between covered. In after which The covering the weeds between ing between t In all the grow times with the

Spraying is to. Equipme by individual they employ s to do the wor and usually r to say, potato had them bad appear to be g the districts v material on a The potato that separates picked up and After that the in Carleton Co and quite a fev under consider is done in the moved in the and preventing tops and veget

Pin Fea

EDITOR "THE

Hens will r they are wor treatment we of winning out

The hen at once is not about it. Wa

Green feed, a good variety into feathers.

Young hens paces as vigo Give them so overwork the

Skimping p growth. They feed, a warm around in.

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N. Y.



weeds as possible before the potatoes come up. With this end in view they are often covered with the horse hoe shortly after planting, and a few days later levelled down with a spike-harrow turned upside down. Just as the young plants are coming through, the cultivator is run between the rows and the potatoes are again covered. In two or three days they are through again; after which they are cultivated several times and hilled. The covering of the young potatoes is an effort to destroy the weeds between the plants in the drill. Those growing in between the rows fall an easy prey to the cultivator. In all the grower goes through his potatoes about seven times with the horse hoe and cultivate.

Spraying is another operation which must be attended to. Equipment for this work is not commonly owned by individual growers in Westmorland County, but they employ someone with some type of power sprayer to do the work. Fields are sprayed three or four times and usually not less than twice. This year, strange to say, potato "bugs" were scarce. Some had them and had them bad, but the growers say that they actually appear to be getting fewer in that locality. In some of the districts visited no arsenical was used in the spray material on account of the absence of the "bug."

The potatoes are lifted usually with a machine digger that separates the tops and tubers. The crop is then picked up and dumped in bulk in a shed or barn to sweat. After that they are sorted and stored. Many farmers in Carleton County have their own potato storage houses, and quite a few may be seen dotted about in the section under consideration. The greater part of the marketing is done in the fall, but some of the crop is stored and moved in the winter. By way of cleaning up the field and preventing the establishment of any disease, the tops and vegetation are raked from the field and burned.

POULTRY.

Pin Feathers From the Poultry Park.

EDITOR "THE FARMER'S ADVOCATE":

Hens will make money for us or cost us more than they are worth according to the care, feed and treatment we give them. That throws the burden of winning out on you. It belongs there, too.

The hen that shed her feathers quickly and all at once is not as thrifty as one which takes her time about it. Watch this and weed out the quick moulters.

Green feed, a generous supply of animal feed and a good variety of grain are needed to put the bird back into feathers.

Young hens do not need to be put through their paces as vigorously as do the mature laying hens. Give them something to do every day, but do not overwork them.

Skimping pullets hampers them in their body growth. They ought to have a liberal supply of good feed, a warm house and plenty of room to get around in.

Sweating at night leads to colds. Plenty of room and lots of pure air are the remedy for this.

Look out for ptomaine poisoning from dead rats lying round. It is plain shiftlessness to leave the decaying rats about to breed disease.

Grit mixed in with wet mashes or other soft feed is pretty sure to cause bowel trouble and may cause a lot of fatality among the birds. Give grit in a place by itself.

Good plan to get some new catalogues of poultry supplies and not depend on the old ones. New methods and new machines of all kinds keep coming. And the up-to-date man will begin early to think and study along these lines.

A hen that sits around a good share of the time ought to be made to work hard. If that does not live her up, nothing but the axe will. You have no use for her.

N. Y.

A BIRD MAN.

Comparisons in Cost of Producing Eggs.

In the report of the Superintendent of Poultry at the Experimental Farm, Agassiz, B. C., the results of several experiments are given showing the comparison between the cost of producing eggs from early and late-hatched pullets, from selected and unselected pullets, and from pullets versus hens. A number of early hatched White Leghorn pullets were taken off the range September 12 and the late-hatched pullets of the same breed on October 11; a difference of practically a month. About fifty birds were put in each pen, and accounts kept of feed consumed and egg production. It was found that early hatched pullets required 9.72 pounds of grain; 1.47 pounds of green feed, and 6.26 pounds of skim-milk to produce one dozen eggs, at a cost of 21.5 cents per dozen. The late-hatched pullets consumed 16.48 pounds of grain; 1.15 pounds of green feed; 6.43 pounds of skim-milk per dozen eggs, at a cost of 34.9 cents, or a difference of 13.4 cents per dozen in favor of early hatched pullets. The same experiment was conducted with Barred Rocks, and while the early hatched pullets gave more profitable returns than the Leghorns, there was not so much difference between the early and late-hatched birds. The early hatched Rocks produced eggs at a cost of 23.98 cents a dozen, and the late-hatched at 25.62 cents. Early hatched White Leghorn pullets were compared as to performance with their mothers, two years old. The pullets produced eggs at a cost of 21.5 cents per dozen and the hens at 41.7 cents, and there was a difference of five per cent. of fertile eggs in favor of the pullets. These figures show that pullets are to be preferred for winter egg production. A comparison was also made between selected pullets and those of mixed strains of the same age. The selected birds produced eggs 11.74 cents per dozen cheaper than the mixed strains, showing that it pays to cull a flock and keep only those which are known to be of egg-laying strains.

partridge shall be hunted, taken or killed before the 15th day of October, 1918." Open season for woodcocks is from the 15th day of October to the 15th day of November, both days inclusive, and for quail, wild turkeys, black and grey squirrels, from the 1st day of November to the 15th day of November in any year, both days inclusive, and no person shall take or kill more than six quail in one day, or twenty-five in a season. Hares may be taken by any means at any time, between the 15th day of October and the 15th day of November and between the 23rd day of December and the 2nd day of January following, and may be taken at any other time by any other means than shooting.—Editor.

A Question of Dignity.

BY PETER MCARTHUR.

I am not sure, but I think I must have sprained my dignity yesterday. Only in that way can I account for the rusty and creaky condition of my anatomy this morning. You see it was this way. A man came along in a big automobile last summer and envied a plump heifer in our pasture field—a granddaughter of Fence-viewer I. He asked if I would sell her and as we are short of stable room I named a price. He accepted at once, merely asking that I should keep her until the cattle were taken off the pasture. Yesterday I received notice to ship her to him by freight and as there was no one else to do it I had to lead her to the railway station myself. The job was not nearly so bad as I expected for she was fairly well halter-broken. After a preliminary struggle in which I convinced her that I was boss and that she could not get away from the rope that was placed around her neck and her nose she started down the lane towards the road. It was then that my dignity began to suffer. I have found by experiment that I can walk along the road in a dignified manner at the rate of about three miles an hour. But the heifer's gait was five miles an hour and as she weighed about half a ton and I weigh something less than twelve "stun" I was the one whose gait had to be changed to meet the circumstances. In spite of myself I had to stretch out at the rate of five miles an hour and as I had to pass many houses and pass through part of the village I naturally tried to look dignified. But a three-mile-an-hour dignity speeded up to five miles an hour is likely to suffer from over strain and that is probably why I am feeling so stiff this morning.

* * * * *

Speaking about a sprained dignity reminds me that our government seems to be suffering in the same way just now. Sir Robert Borden, a gentleman of easy-gaited dignity, had been leading Sir Sam Hughes, whose impetuosity exceeds all speed limits, and a crisis developed. Sir Robert found that he could not hang on to his dignity and Sir Sam at the same time, so he finally let go the rope. It is what loyal party papers call "an unfortunate occurrence," but I noticed that the general public shows a tendency to grin. For some time past people have been wondering how long the government would continue to be dragged behind Sir Sam's chariot, and now that Sir Robert has thrown him loose and Sir Sam is kicking up his heels in the open they expect stirring times. It is easier to let Sir Sam go than to catch a competent successor. His headlong energy was invaluable in the early days of the war and his scorn of red tape pleased the plain people, but when he began going in for the pomp, pride and circumstances of war, the glories of ceremonial parades and posturing in the limelight the people began to weary of him. But let no one suppose that because he has been removed from the cabinet his political career is ended. He is still a member of parliament and whenever it seems good to him he can still give the welkin an earache. Anyone who tries to pronounce a political funeral oration over him will probably find himself in the position of Mark Twain's meditative spider that stepped on a hot griddle. "He first exhibited wild surprise and then shrivelled." Personally I have a warm spot in my heart for Sir Sam. While I cannot say that I love him because of the enemies he has made I love him for some of the rows he has made. Not only has he sassed back aristocratic officialdom, but I am told that on one occasion he quarrelled with a bishop. Now, it has always been my ambition to quarrel with a bishop. They are so austere and dignified that as a poor, weak, fellow human being I resent their

FARM BULLETIN.

Re Fur Bearing Animals.

EDITOR "THE FARMER'S-ADVOCATE":

In "The Farmer's Advocate" of November 2, page 1826, in your answer to the queries of G. H. re the closed season for fur-bearing animals, you give the closed season for muskrats December to May. This was correct for 1915, but there is a new regulation for 1916. Section 11, clause 2, of 1916 regulations reads: "No muskrats shall be hunted, taken or killed, or had in possession of any person in that part of the Province lying South of the French and Mattawa Rivers, except from the first day of March to the 21st day of April, and in that part of the Province lying North of the French and Mattawa Rivers from the 1st day of April to the 21st day of May. No muskrats shall be shot or speared at any time, nor shall any muskrat house be cut, spread, broken or destroyed at any time, except in defence or preservation of property." You will notice the season in this part of Ontario does not now open until the 1st of March, 1917, and closes the 21st day of April. Section 9, clause 2, reads: "No person shall hunt, or trap fur-bearing animals except under the authority of a license, but this shall not apply to farmers or farmers' sons trapping on their own lands." You will notice that anyone hunting or trapping anywhere except on their own property must take out a license to do so. Section 48, clause E, states that a resident of Ontario to hunt and trap fur-bearing animals must pay a license fee of five dollars.

OBSERVER.

[Note.—The answers published in the issue referred to were not taken from the latest Game and Fisheries laws. A number of changes have been made in the 1916 laws which hunters and trappers would do well to bear in mind. Section 10, clause D, states that "no person shall hunt, take, kill or destroy grouse, pheasant, prairie fowl, or partridge except from the 15th day of October to the 15th day of November, both days inclusive. No person shall take or kill more than ten partridges in one day, and no grouse, prairie fowl or



Pioneer Pride.

A new variety selected from about 300 seedlings originated from potato bulbs.



Irish Cobbler.

A popular variety in New Brunswick.

air of superiority. But whenever I met a bishop his aloofness was so vertiginous and his front so infrangible that I hadn't the audacity to pick a quarrel with him. With Sir Sam it was different. He quarrelled with a bishop as part of the day's work, and I am told that his language was "painful and frequent and free." Quarrelling with a bishop is one of the prerogatives of a king and to have an uncompromising, though titled, democrat like Sir Sam try conclusions with one is something to endear him to the plain people. Far from thinking that his dismissal from the cabinet ends his career I expect to see him bulk large in the politics of the near future and I do not intend to write his obituary until,—to quote from the old Fourth Reader, with which he was familiar as a teacher—he himself,

"Wrapping the draperies of his couch about him Lies down to pleasant dreams."

A correspondent who approved of my comment on the "Dusty Miller" but did not think I had my facts altogether straight writes as follows.

"Evidently you haven't been to the mill with a grist for some time or you would know better than to say that we get 35 lbs. of flour for a bushel of wheat. What we get here is from 25 to 28 lbs. I think that 27 lbs. is about the average for a bushel of good wheat. That means that the man that produces the goods gets the toll and the miller gets the grist. (No wonder he whistles.) If we want bran or shorts we have to buy and pay nearly as much for a hundred lbs. as we get for the same weight of wheat. I have had hundreds of bushels of good wheat ground into cattle and hog feed because it was cheaper than anything else I could buy after it had passed out of the producers hands. We hear a lot of talk about appointing a commission to look into this matter in order to find out why prices are so high. They are barking up the wrong tree. If there is any place more worthy of their steel than this difference between the price of wheat and bread I would like to know where it is."

So it seems that matters are much worse than I suggested in my article. It looks as if Hon. Mr. Crothers could profitably begin his investigations with the case of the millers.

News has reached this office that Prof. J. A. McLean, at one time on the staff of "The Farmer's Advocate," and who for some years has been in the United States, first as Professor of Animal Husbandry in Missouri State College and later connected with the Quaker Oats Company Feed Branch, has been appointed Professor of Animal Husbandry in the British Columbia Agricultural College, Vancouver, B. C. We understand that Prof. McLean has taken up his new duties.

The Hon. James S. Duff Dies Suddenly.

It was with a feeling of regret that Ontario heard of the death of the Hon. James Duff, Minister of Agriculture for this Province, which occurred at a friend's home in Alliston, Friday, November 17. The late Mr. Duff had been in ill health for some months and was confined to his home for some time during the past summer. This fall, however, he returned to his duties



The late Jas. S. Duff.

at the Parliament Buildings and was there in the best of spirits on the day previous to his sudden demise. The late Minister's failing health received a severe shock about three weeks ago when the news came from France that his son, G. C. Duff, a graduate of the O. A. C. and a fine type of young Canadian manhood, had paid

the supreme sacrifice in the battle of the Somme. Heart trouble was responsible for the Hon. Mr. Duff's breakdown and death.

The late Mr. Duff was born in Cookstown, Ont., of Scotch-Irish parentage and was in his sixty-first year at the time of his death. Upon leaving school he returned to his father's farm. In 1898 he was elected to the legislature, after a wide experience in municipal affairs, for the riding of West Simcoe and in 1908 was appointed Minister of Agriculture. He was an ardent politician, a whole-souled Britisher, a true Canadian, upright, straight-forward, out-spoken, honest, and withal kindly, generous and sincere. The family, consisting of Mr. Duff's widow, two daughters, and one son with the overseas forces, have the sympathy of the people of the Province and of many residents of other provinces in their sad hour of bereavement.

Testing Milk Under the Dairy Standards Act.

The Dairy Standards Act passed at the last session of the Ontario Legislature providing for the paying of milk and cream on a quality basis comes into effect in the spring. It has been decided by those in authority that for the first year or two testing should be done by officials in the employ of the Government, in order that the new system may be operated as smoothly and successfully as possible. By this method the expense to the patrons of cheese factories will be reduced to a minimum. The factory will be expected to provide the equipment and do the incidental work which may be necessary; the Department will look after the actual testing. The Department is anxious that there should be a full and free discussion at the annual cheese factory meetings this winter, in order that all the patrons may understand the system of paying by test. It can only be made successful by the hearty co-operation of both patrons and cheese-factory operators. The tests which have been made through the past summer showing the different amounts of cheese made from one hundred pounds of milk, varying in fat and casein content, constitute a very strong demonstration of the value of the system which the Dairy Standards Act seeks to inaugurate in making the returns of the dairy-men commensurate with the quality of goods produced. Paying for milk by test is the only fair way, and the new Act should receive the support of every dairy-man.

Toronto, Montreal, Buffalo, and Other Leading Markets.

Toronto.

Receipts of live stock at the Union Stock Yards, West Toronto, Monday Nov. 20, were 273 cars, 5,904 cattle, 322 calves, 264 hogs, and 2,484 sheep. Cattle market active and strong at last week's quotations, and calves steady. Sheep firm; lambs slow at \$10.75 to \$11.00. Hogs same as last week.

The total receipts of live stock at the City and Union Stock Yards for the past week were:

	City	Union	Total
Cars.....	98	704	802
Cattle.....	1,179	8,262	9,441
Calves.....	82	806	888
Hogs.....	1,991	14,406	16,397
Sheep.....	1,836	11,401	13,237
Horses.....	48	1,130	1,178

The total receipts of live stock at the two markets for the corresponding week of 1915 were:

	City	Union	Total
Cars.....	58	743	801
Cattle.....	932	11,570	12,502
Calves.....	83	683	766
Hogs.....	574	7,139	7,713
Sheep.....	1,817	8,283	10,100
Horses.....		2,447	2,447

The combined receipts at the two markets for the past week show an increase of 1 carload, 122 calves, 8,684 hogs, 3,137 sheep, but a decrease of 3,061 cattle and 1,269 horses when compared with the corresponding week of 1915.

The live-stock market opened on Monday with some 3,500 cattle of all grades on sale. Trade was active and strong, and an early clearance was made at prices from fifteen to twenty-five cents higher than the close of the week previous. During the week several good loads of steers and heifers were sold; one lot of 21 steers, average weight 1,390 lbs., sold at \$8.75, another load of 18, average weight 1,410 lbs., sold at \$8.45, another load of 20, average weight 1,260 lbs., sold at \$8.55, while several loads sold at

from \$8 to \$8.40. The week closed with choice heavy steers selling at \$8.50 to \$8.75; good heavy steers at \$8 to \$8.25. Good butcher cows were steady to strong all week, and brought 25c. per cwt. more than the previous week. Canners and cutters were very much in demand, canners selling at from \$3.85 to \$4.25, and cutters at \$4.50 to \$5. Good to choice stockers and feeders were active and in demand, selling at from \$6.50 to \$7.25, while common to medium animals were decidedly slow and sold at from \$5 to \$6. Milkers and springers of quality were steady and sold at from \$85 to \$115; the common kind were slow and drabby. Lambs—The lamb market was active and strong for the first three days. Choice and strong for the first three days. Choice lambs selling at from \$11.25 to \$11.40, while several carloads of choice Black-faces sold at \$11.50 and \$11.55; heavy lambs sold at \$10.50, and culls at \$8 to \$9. On Thursday, however, the market was very slow and drabby, and 25c. to 50c. lower, and closed with about 1,000 lambs left unsold. Sheep were active and strong all week; light handy sheep selling at \$8 to \$9, while a number of extra good sheep sold at \$9.25. Calves were steady to firm, choice veal selling at 10 1/2c. to 11 1/2c. per lb. Hogs were active. Packers made a strong effort to lower the price by 25c. per cwt., but were not successful. The market closed strong with fed and watered selling at \$10.75, and weighed off cars at \$11; a few decks of select hogs sold 10c. higher than the above prices.

Live Stock Quotations.—Steers, choice heavy, \$8.50 to \$8.75; good heavy, \$8 to \$8.25. Butcher steers and heifers, choice, \$7.65 to \$8; good, \$7.15 to \$7.40; medium, \$6.75 to \$7; common, \$5.50 to \$6.25. Cows, choice, \$6.40 to \$6.65; good, \$6 to \$6.25; medium, \$5.50 to \$5.75; common, \$4.85 to \$5.25; canners, \$3.85 to \$4.25; cutters, \$4.50 to \$5. Bulls, choice, \$7 to \$7.25; good, \$6.25 to \$6.50; medium, \$5.75 to \$6; common, \$4.50 to \$5.25. Stockers and feeders, choice, \$6.50 to \$7.25; common to medium, \$5 to \$6. Milkers and springers, best, \$85 to \$115;

medium, \$60 to \$75; common, \$45 to \$55. Lambs, \$10.50 to \$11.15; cull lambs, \$8 to \$8.50. Sheep, light handy, \$8.50 to \$9; heavy, \$6.50 to \$8. Calves, choice, \$10.50 to \$11.50; medium, \$8 to \$10; heavy fat, \$6 to \$8; grassers, \$5 to \$6.50. Hogs, fed and watered, at \$10.75; weighed off cars at \$11.

Breadstuffs.

Wheat.—Ontario, No. 2 winter, new, per car lot, \$1.88 to \$1.90; No. 3 winter, per car lot, \$1.86 to \$1.88 (according to freights outside). Manitoba, track, bay ports—No. 1 northern, new, \$2.08 1/2; No. 2 northern, new, \$2.03 1/2; No. 3 northern, new, \$1.98; No. 4 wheat, new, \$1.81; old crop, trading 3c. above new crop.

Oats.—Ontario, No. 2 white, 66c. to 68c., nominal; No. 3 white, 65c. to 67c., nominal. Manitoba oats (track, bay ports)—No. 2 C. W., 72 3/4c.; No. 3, 71 1/2c.; extra No. 1 feed, 71 1/2c.; No. 1 feed, 71 1/2c.

Barley.—Malting barley, according to freights outside, \$1.18 to \$1.20, nominal; feed barley, nominal.

Peas.—According to freights outside; No. 2, \$2.40 to \$2.45.

Buckwheat.—Nominal.

Corn.—American (track, Toronto) No. 3 yellow, new, \$1.14, immediate shipment.

Rye.—No. 2, new, \$1.40 to \$1.42.

Flour.—Manitoba first patents, in jute bags, \$10.40; second patents, in jute bags, \$9.90; strong bakers', in jute bags, \$9.70. Ontario, new, winter, according to sample, in bags, \$8.50, track, Toronto.

Hay and Millfeed.

Hay.—Track, Toronto, No. 1, per ton, \$13 to \$14; No. 2, per ton, \$11 to \$12.

Straw.—Car lots, per ton, \$8 to \$9, track, Toronto.

Bran.—Per ton, \$31.

Shorts.—Per ton, \$34 to \$35.

Middlings.—Per ton, \$37 to \$39.

Good Feed Flour.—Per bag, \$2.70 to \$2.80.

Country Produce.

Butter.—Creamery, fresh-made pound

squares, 44c. to 46c. per lb.; creamery solids, 43c. to 44c. per lb.; dairy, 40c. to 41c. per lb.; separator dairy, 41c. to 42c. per lb.

Eggs.—New-laid eggs advanced, selling at 55c. per dozen, in cartons; fresh eggs in case lots bringing 38c. to 39c. per dozen, and selects, in case lots, 50c. per dozen. Cold storage selects bringing 41c. per dozen.

Cheese.—June, 25c. per lb.; new, 24c. per lb.; twins, 24 1/2c. per lb.

Honey remained stationary in price with an active demand. Sixty-lb. tins selling at 12c. per lb.; one-lb. sections, \$2.40 to \$3 per dozen.

Poultry.—Shipped again in very heavily during past week. Live-weight prices: spring chickens, per lb., 13c.; spring ducks, per lb., 11c.; geese, per lb., 10c.; turkeys, young, per lb., 20c.; fowl, 4 lbs. and over, per lb., 14c.; fowl, under 4 lbs., per lb., 10c.; squabs, per dozen, dressed, \$3.50 to \$4.

Hides and Skins.

City hides, flat 20c.; country hides, cured, 21c.; country hides, part cured, 19c.; country hides, green, 17c.; calf skins, per lb., 25c.; kip skins, per lb., 22c.; sheep skins, city, \$2.50 to \$3.50; sheep skins, country, \$1.50 to \$3; lamb skins and pelts, \$1.50 to \$2; horse hair, per lb., 38c.; horse hides, No. 1, \$6 to \$7; No. 2, \$5 to \$6; wool, washed, 42c. to 46c. per lb.; wool, rejections, 35c. to 38c. per lb.; wool, unwashed, 32c. to 35c. per lb.; tallow, No. 1, 8c. to 9c.; solids, 7c. to 8c.

Wholesale Fruits and Vegetables.

Potatoes remained stationary in price during the past week; New Brunswick Delawares selling at \$2.25 to \$2.35 per bag; British Columbias at \$2.10 and \$2.15 per bag; Westerns at \$2 per bag; Ontarios (very few) at \$2.10 and \$2.15 per bag.

There were still a few outside grown tomatoes being shipped in, which brought 40c. to 60c. per 6-qt. basket, and 65c. to

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THE ROYAL BANK OF CANADA

Capital Authorized - - \$ 25,000,000
 Capital Paid Up - - - 11,785,000
 Reserve Funds - - - 13,236,000
 Total Assets - - - - 214,000,000

HEAD OFFICE: MONTREAL

Branches throughout every Province of the Dominion of Canada

Accounts of Farmers Invited
 Sale Notes Collected

Savings Department at all Branches

\$1 per 11 qts.; the hot-house variety being rather slow at 25c. per lb.
 Onions firmed slightly; the Spanish variety selling at \$5 per case; Americans at \$4 per cwt., and British Columbias at \$3.50 to \$3.75 per cwt.
 Cabbage advanced in price, selling at \$2.25 to \$2.50 per bbl., and 2c. per lb.
 Turnips are a little lower in price, going at 75c. per bag.
 Carrots, beets and parsnips remained nearly stationary; selling at \$1.25, \$1.35, and \$1.25 to \$1.35 per bag respectively.
 Florida grapefruit and oranges arrived freely; the former selling at \$4 to \$4.50 per case, and the oranges at \$3.75 to \$4.50 per case.

Montreal.

Choice steers continue as scarce as ever on the local market. Very few are arriving, and the demand for them is not particularly keen. About the best prices paid during the week were 7½c. to 7¾c. per lb., these being for good steers. Fair quality stock sold at 6½c. to 7c., while common steers ranged all the way down to 5½c. Butchers' cows were in fair demand and sold at 4½c. to 6¼c. per lb., according to quality, while bulls brought about ½c. higher prices than cows. The feature of the market continued to be the active demand from packers for canning cattle. Supplies were nearly all of this class, so that an active trade went on at prices ranging from 4½c. to 5c. for bulls and 3½c. to 4c. for cows. Sheep and lambs were in good demand, and the market was firm. Sales of lambs took place at 10¼c. to 11c. per lb., while sheep sold at 6¾c. to 7½c. per lb. Choice calves were scarce and in good demand at from 7c. to 8c. per lb., while the grass-fed stock sold at 4c. to 6c. This market for hogs continued steady under a good demand with sales of selected lots at 11¼c., and of good quality at 11c. per lb., weighed off cars.

Horses.—Owing to the slippery roads, quite a number of accidents have been taking place, and it has been necessary for some of the larger concerns to make purchases of additional horses. Otherwise, the market showed little of interest. Prices were as follows: heavy draft horses, weighing 1,500 to 1,700 lbs., \$200 to \$250 each; light draft horses, weighing 1,400 to 1,500 lbs., \$150 to \$200 each; small horses, \$100 to \$125; culls, \$50 to \$75 each; choice saddle and carriage, \$200 to \$250 each.

Dressed Hogs.—The market for dressed hogs showed but slight change during the week, though some purchases were made at lower figures than recently prevailing. The market, however, was generally firm, the weather being cold. Prices for fresh-killed, abattoir-dressed were 15½c. to 16c. per lb.

Potatoes.—Potatoes were quite scarce and promise to become even scarcer. Prices were consequently firm, and sales of car lots of Green Mountains were reported at \$2.25 per 80 lbs., ex-track. Quebec potatoes sold at \$2 to \$2.10. In a smaller way, 10c. to 20c. was added to these prices.

Honey and Maple Syrup. The market was unchanged at 90c. per 8-lb. tin of syrup; \$1.05 for 10-lb. tins, and \$1.25 to \$1.50 for 13-lb. tins, according to quality. Sugar was 13c. per lb. Clover was in moderate demand at 15c. per lb. for white clover comb; 12½c. to 13c. per lb. for white extracted and brown clover

comb, and 10½c. to 11c. for brown extracted. Buckwheat honey was 9c. to 10c. per lb.

Eggs.—Quotations on new-laid eggs were of little significance, inasmuch as all sorts of prices were paid. Strictly new-laid, however, were quoted at 53c. to 55c., while so-called fresh eggs were 48c. to 50c.; No. 1 selected, 40c.; No. 1 candled, 36c.; No. 2 candled, 32c.

Poultry.—The market for poultry again attracted some attention. Prices were firm but apparently not out of line with other meats. Turkeys were 23c. to 26c.; chickens, 16c. to 22c.; fowls, 12c. to 16c.; geese, 14c. to 17c., and ducks, 17c. to 18c. per lb.

Butter.—Prices for creamery were very firm, but have been holding steady, being 43c. to 43½c. for finest and ½c. less for fine. Undergrades were quoted at 41½c. to 41¾c., and dairy butter, 38c. to 39½c.

Cheese.—The market was exceedingly strong, and high record prices were paid all the way round. Present quotations on finest Westerns colored were 23¾c. to 24c., and on finest Eastern colored at 23½c. to 23¾c.; white cheese sells at a spread of ½c. below colored.

Grain.—The market for oats was exceedingly strong. No. 1 Canadian Western oats sold at 7c. per bushel, and No. 2 at 75c., while No. 2 feed sold at 73c. per bushel, ex-store.

Flour.—The market for flour was higher than ever. Manitoba first patents were \$10.50 per barrel, in bags; seconds being \$10, and strong bakers', \$9.80. Ontario winter wheat was firm at \$9.50 to \$10.80 per barrel for 90 per cent. patents, and \$4.55 to \$4.70 per bag.

Millfeed.—Bran sold at \$30 per ton in bags; shorts at \$33; middlings at \$35 to \$37; mixed mouille at \$40, and pure grain mouille at \$35 to \$37 per ton.

Baled Hay.—The market was unchanged at \$30 per ton for No. 2 baled hay in car lots, ex-track; \$11.50 for No. 3, and \$10.50 for clover mixed.

Hides.—Lamb skins were up to \$2.45 each, and horse hides jumped another \$1 at \$5 to \$6.50 each; beef hides were steady at 25c. for No. 1; 24c. for No. 2, and 23c. per lb. for No. 3. Calf skins were 33c. per lb. for No. 1, and 31c. for No. 2. Tallow was unchanged at 2½c. per lb. for rough, and 7½c. to 8c. per lb. for rendered.

Buffalo.

Cattle.—Offerings were not quite as liberal last week as the week before, but a good, strong run was had and prices were generally advanced, shipping steers generally, of which there were around fifteen to twenty loads, selling from 15 to 25 cents higher, best here being Canadians and running from \$9.25 to \$9.50, with the best natives reaching \$9.35. Best load of heavy weight Canadian steers that have been offered this year. Altogether, there were better than fifty cars of Canadian cattle included in the offerings last week. On butchering cattle, trade was mostly a dime to a quarter higher, real choice kinds showing the heaviest advance. Medium cows and heifers were about a dime higher, as were an in-between, fair kind of steers; canners sold a dime to fifteen higher, the last part of the week these showing as much as fifteen cents to a quarter stronger deal. A couple of large Toronto packers are having canners killed by local packers here, for army demand. Stockers and feeders sold a dime to fifteen higher, bulls generally showed this advance, and it was a firm trade on all grades of dairy cows. Receipts for the week totaled 5,950 head, as against 6,400 for the previous week, and 8,000 head for the corresponding week last year. Quotations:

Shipping Steers.—Choice to prime natives, \$9.50 to \$10.25; fair to good, \$8.25 to \$8.75; plain, \$7.50 to \$8; very coarse and common, \$7 to \$7.50; best Canadian, \$8.40 to \$8.65; fair to good, \$7.50 to \$8; common and plain, \$7 to \$7.25.

Butchering Steers.—Choice heavy, \$8.25 to \$8.50; fair to good, \$7.50 to \$8; best handy, \$7.75 to \$8.50; fair to good, \$6.75 to \$7.50; light and common, \$6 to \$6.50; yearlings, prime, \$9.50 to \$10.25; fair to good, \$8.50 to \$9.

Cows and Heifers.—Best handy butcher heifers, \$7.40 to \$7.65; fair butchering heifers, \$5.75 to \$6.25; light and common, \$5 to \$5.50; best heavy fat cows, \$6.75 to \$7; good butchering cows, \$6 to \$6.50; medium to fair, \$5 to \$5.50; cutters, \$4 to \$4.50; canners, \$3 to \$3.75.

Bulls.—Best heavy, \$6.75 to \$7; good butchering, \$6.25 to \$6.50.

Stockers and Feeders.—Best feeders, \$7 to \$7.15; common to fair, \$5.25 to \$5.60; best stockers, \$6.50 to \$7; common to good, \$5 to \$5.50.

Milchers and Springers.—Good to best, in small lots, \$80 to \$100; in carloads, \$70 to \$75.

Hogs.—Last week started with higher prices, when on Monday good hogs sold up to \$10.40 and \$10.50, with bulk of the York weight grades going at \$10.25. After Monday, however, prices were on the decline; Tuesday's top being \$10.45, with York weights selling at \$10.15 and \$10.25; Wednesday values went off 15 to 20 cents; Thursday saw another drop of ten to fifteen cents, and Friday's market, when bulk sold at \$9.90 and \$10, with nothing above \$10.10, was steady to a dime lower than Thursday. Monday pigs sold at \$9.25, and the next four days the throwouts, lights and pigs, went at a range of from \$8.75 to \$9. Roughs the fore part of the week sold up to \$9.25, and on the low days they went from \$8.85 to \$9. Stags were unchanged, selling anywhere from \$7.50 to \$8.50. Receipts last week were 42,700 head, being against 50,700 head for the week before, and 57,600 head for the same week a year ago.

Sheep and Lambs.—A rattling good sheep and lamb market was witnessed last week, prices showing a big advance over the previous week. Monday top lambs sold at \$12; Tuesday's top was \$11.85; Wednesday they were back to \$12; Thursday tops reached \$12.15, and Friday bulk sold at \$12. Cull lambs reached as high as \$11, top yearlings were quoted up to \$10, wether sheep were ranged up to \$9, and ewes from \$7.50 to \$8. For the past week receipts totaled 16,900 head, as compared with 17,420 head for the week before, and 26,200 head for the same week a year ago.

Calves.—Prices were on a high range last week. Monday bulk of the top sold at \$13.50; Tuesday majority landed at \$13; Wednesday tops again brought \$13.50; Thursday bulk sold at \$14, and Friday the general price for choice lots was \$13.50. Culls brought as high as \$11.50, although they had to be very desirable to fetch above \$10.50. Around 250 head of Canadians were on Friday's market, majority of which were heavy fat calves and grassers, and they sold from \$6 to \$7.50. Receipts last week were 2,100 head, as against 2,668 head for the week previous and 2,200 head for the same week a year ago.

Chicago.

Cattle.—Beeves, \$6.75 to \$12.05; western steers, \$6.60 to \$10.25; stockers and feeders, \$4.75 to \$7.85; cows and heifers, \$3.75 to \$9.50; calves, \$8.75 to \$12.50.

Hogs.—Light, \$8.40 to \$9.60; mixed, \$9.05 to \$10; heavy, \$9.35 to \$10; rough, \$9.35 to \$9.50; pigs, \$6.25 to \$8.30.

Sheep.—Lambs, native, \$9.60 to \$11.60.

Cheese Markets.

London, bidding 24c., no sales; Belleville, 25c. and 26 1-16c.; Mont Joli, 22½c.; St. Hyacinthe, 23½c.; Watertown, N. Y., 23¼c.; Montreal, finest westerns, 24½c. to 25c.; finest easterns, 24½c.; New York, specials, 24c. to 24½c.; average fancy, 23¾c.

Some Shorthorn Sales in U. S. A.

Some fairly successful Shorthorn sales were conducted in the United States during the week ending November 11. Retzlaff Bros., Walton, Neb., on Nov. 9, sold 47 head for an average of \$262. The consignment of young bulls made the average of \$307, and 32 females averaged \$240. The first prize senior calf at the Nebraska State Fair, Wellington Premier, sold for \$780. Snowflake's Stamp went at \$410.

S. A. Nelson & Sons, Malcolm, Neb., on November 10, sold 50 head of Shorthorns at public auction at an average price of \$313; 14 bulls averaged \$274, and 36 females \$328. The top price for females was \$650, paid for a red two-year-old heifer, Diamond's Red Rose. The highest priced bull was Royal Sultan, at \$525. This was the first-prize aged bull at the Nebraska State Fair this season.

Elgin Club Sale at St. Thomas.

Fifty females and five young bulls make up the number of Holsteins offered by the Elgin Pure-Bred Breeders' Association in their club sale, to be held at Durdle's Feed Stable, St. Thomas, Tuesday, Nov. 28. The animals offered are selected from a number of the leading herds in Western Ontario, and Mr. Carr, Manager of sale, informs us that everything in the sale has been personally inspected by the officers of the Club, so the public are assured that only the best the breed produces will be brought before them on the afternoon of Nov. 28. In the lot are sons and daughters of such noted sires as FINDERNE KING MAY FAYNE, Paladin Ormsby, Idaline Paul Veeman, grandsons of May Echo Sylvia and other families equally good.

The only consigner who has as yet sent us full particulars regarding his offering is L. H. Lipsit, Forest Ridge Farm, Straffordville. He writes that he is putting in two sons and one daughter of his noted sire FINDERNE KING MAY FAYNE. These bulls are both just under the year and are each capable of winning in strong competition, and the seven-day records of the dam and sire's dam of one of these average over 31 lbs. The dam of the other is a 20-lb. cow. The daughter of King May Fayne mentioned is a well-grown yearling from a daughter of Lewis Prilly Rouble Hartog. This heifer is supposed to be safe in calf to a grandson of May Echo Sylvia.

Two others in the lot are daughters of King Segis Posch Veeman, a grandson of King Segis, while another is a three-year-old daughter of Grace Fayne 2nd Sir Colantha, carrying her second calf.

Particulars regarding all the consignments may be had by applying at once to Fred. Carr, Box 116, St. Thomas, or Neil Burton, R. R. No. 2, Port Stanley, either of whom will be pleased to mail you a catalogue at once.

The Melrose Holstein Sale.

Scott Bros., of Burn brae head Farm, Melrose, Ont., find that they will not have sufficient feed to winter their herd of high-class grade Holsteins, so they are offering 36 at public auction on November 29. Ten are choice 2-year-old heifers in milk; three are 3-year-old heifers in milk; eight are choice 2-year-old springers; there are seven nice heifer calves, and the remainder are young cows, except one, the herd header. In all there are 20 head in milk. The 10 head of 2-year-old heifers, the three 3-year-olds and seven cows were giving 700 lbs of milk daily before the drought dried up the pasture. The eight springers are by registered sires and are bred to a registered bull. The heifers now in milk are due to freshen again in the spring. Burn brae head Farm is at Melrose; all trains, G. T. R. and C. P. R., will be met on day of sale at Komoka. For further particulars write to Scott Bros. for their large poster, and address them at Hyde Park, Ont.

Sale Dates.

Nov. 27.—Arthur Marston, ½ mile north of Paris, Shorthorns.

Nov. 28.—Elgin County Pure-bred Breeders' Association at St. Thomas, Dairy Cattle.

Nov. 29, 1916.—Scott Bros., Melrose, Ont., Holsteins.

Dec. 5.—J. C. Boeckh, Willowdale, Ont., Holsteins.

Dec. 13.—Oxford District Holstein Breeders' Club, Woodstock, Ont., Holsteins.

Dec. 14.—Wm. H. Hartin, Twin Elm, Ont., Shorthorns.

Dec. 28.—Southern Counties Ayrshire Breeders' Club, Tillsonburg, Ayrshires.

Coming Events.

Dec. 1 to 8.—Ontario Provincial Winter Fair, Guelph, Ont.

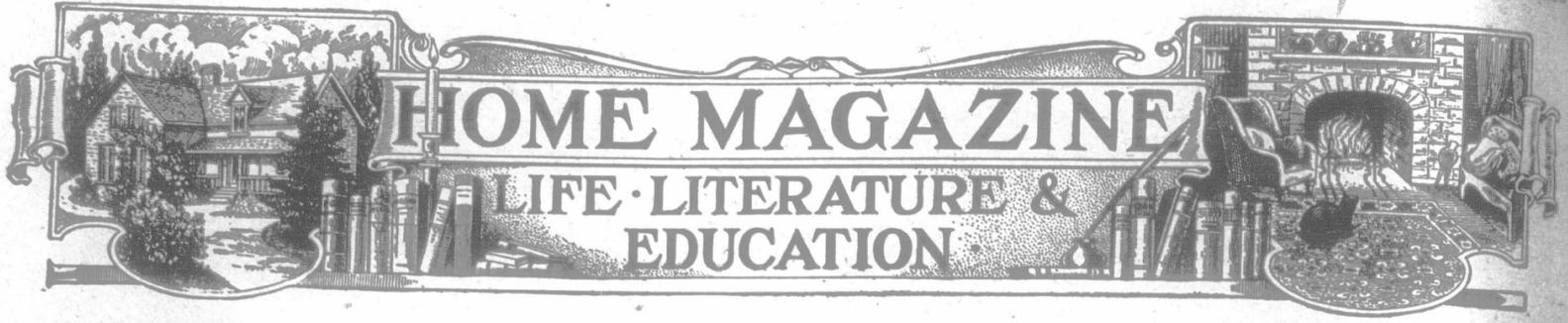
Dec. 2 to 9.—International Fat Stock Show, Chicago, Ill.

Dec. 8 to 9.—Toronto Fat Stock Show, Union Stock Yards, Toronto.

Dec. 12, 13, 14.—Ontario Bee Keepers' Association Convention, at Toronto.

It is stated that Russia now holds over 1,000,000 German and Austrian military prisoners.

It has been suggested that at the close of the war Palestine be set apart as a peace memorial, developed to the full, and made into a world sanctuary of beauty on high ideals.



The Duke of Devonshire.
Canada's new Governor General.

The Unlearned Creed.

CORA A. MASTON DOLSON.
"Now will I learn the creed," said she,
"A creed to live by, or to die;
Enough of walking heedlessly"—
Then came a small child's troubled cry.
Oh, little stumbling feet that failed,
And drew her from that written creed!
Oh, tender heart that love exhaled
Wherever weakness breathed its need!
The morning passed, the noon went by,
The grasses with the dews were wet,
When, lifting shamed eyes to the sky,
She said, "I have no creed, as yet."
"Dear Lord, my hands have been so filled,
I could not read where rules were writ:
But love from out my heart I spilled
And let Thy children have of it."

The Cricketers of Flanders.

BY THE AUTHOR OF "KITCHENER'S MOB",
IN THE "SPECTATOR", LONDON.
The first to climb the parapet
With "cricket balls" in either hand;
The first to vanish in the smoke
Of God-forsaken No-Man's-Land.
First at the wire and soonest through,
First at those red-mouthed hounds of hell,
The Maxims, and the first to fall,—
They do their bit and do it well.
Full sixty yards I've seen them throw
With all that nicety of aim
They learned on British cricket fields.
Ah, bombing is a Briton's game!
Shell-hole to shell-hole, trench to trench,
"Lobbing them over" with an eye
As true as though it were a game
And friends were having tea close by.
Pull down some art-offending thing
Of carven stone, and in its stead
Let splendid bronze commemorate
These men, the living and the dead.
No figure of heroic size,
Towering skyward like a god;
But just a lad who might have stepped
From any British bombing squad.
His shrapnel helmet set a tilt,
His bombing waistcoat sagging low,
His rifle slung across his back:
Poised in the very act to throw.
And let some graven legend tell
Of those weird battles in the West
Wherein he put old skill to use,
And played old games with sterner zest.
Thus should he stand, reminding those
In less-believing days, perchance,
How Britain's fighting cricketers
Helped bomb the Germans out of France.
And other eyes than ours would see;
And other hearts than ours would thrill;
And others say, as we have said:
"A sportsman and a soldier still!"

Travel Notes.

From Helen's Diary.

Spiez, Switzerland,
Oct. 3, 1916.

"Been over the Loetchberg yet?"
This is the question we have been asked a thousand times, more or less, since we have been in Switzerland. Hitherto, we have always had to say:—"No, not yet," an answer that invariably caused the eyebrows of the questioner to arch in surprise.

"What!" he (or she) would ejaculate in amazement, "Been in Switzerland two years and not been over the Loetchberg yet! How strange!"

But since yesterday we can answer in the affirmative, for yesterday we went "over" the Loetchberg, and consequently we are filled with that serene feeling of satisfaction which comes to those who have done their duty.

The Loetchberg is the newest and most thrillingly panoramic of the Swiss Mountain Railways; it was just completed in 1913, the year before the war, and cost 83 million francs. It runs between Spiez and Brique, both of these towns being important railway junctions. The entire trip only takes about an hour and a half, but it is an hour and a half fairly bristling with weird sensations. For the Loetchberg is no ordinary mountain-railway. It doesn't just go up some scary place and come down again. It is a railway that loves variety and excitement. There isn't anything it doesn't do. It climbs, and toboggans, and loops the loop, and corkscrews through tunnels, and whirls over high bridges and long viaducts, and spins along the edges of fearful precipices at a speed that would be quite terrifying at times if one had not such implicit faith in the good behaviour of Swiss Railways. Between Frutigen and Brique, which is the most mountainous part of the line, there are

tunnels he regaled us with extracts from these cards.

"The circular and turning tunnels," he read, "begin near the little Blue Lake, about which so much has been said and sung (entrance fee one franc; tickets for a party of people at reduced prices.)"

"The name alone indicates one of Nature's caprices worth seeing; close to the station, the forces of Nature have heaped up, in the very depths of the forest, huge blocks with which they have formed a kind of rampart. In the very middle of this chaos lies the marvellous mirror of the little Blue Lake."

Just then we emerged from the tunnel "There it is!" I exclaimed pointing excitedly out of the window.

"Where?" asked Aunt Julia.

But before I could answer we were in another tunnel.

"There it is again," said I, as we came out into the daylight on a higher ledge. This time it was on the other side of the car, for we were ascending the mountain in spirals. Every time we caught sight of the little Blue Lake we were higher up and the lake was getting smaller. When we last glimpsed it, it looked like a little sapphire pool.

"Near Kandersteg," read Uncle Ned, "we enter the large Loetchberg tunnel, 14,605 metres long (about nine miles). By its length it is the third tunnel in the world."

(At this point Uncle Ned drew his red Baedeker out of his pocket to look up the length of the other two tunnels, and announced oracularly that the Simplon was twelve and a half miles long, and the St. Gothard nine and a half.)

Then he resumed his reading. "On coming out of this tunnel the train stopped at Goppenstein. On the slope opposite the station is the cemetery of the victims fallen during the construction of the tunnel."

"I don't want to see it," said Aunt

fields, and vegetable plots, and flower gardens, that, seen from a height, these bits of color really suggest patchwork.

Along this section of the road is the Victoria Rock, so-named from the alleged resemblance to the head of Queen Victoria.

Brique, the terminus of the road, is a frontier town just near the entrance to the Simplon tunnel, which leads into Italy. The architecture of Brique is quite Italian in character, and so are some of the dirty streets, and also some of the smells. In the middle of the town there is a fifteenth century Chateau with three high, towers topped with shining cupolas; and there is an interesting old Jesuit church up on a hill. We climbed the hill and stepped into the church. Someone was playing the organ beautifully and we sat down to listen. It was a splendid organ, and the player was a real artist. We could not see him, but I imagined him to be a handsome young priest, with beautiful, soul-lit eyes. I'm glad I didn't see him.

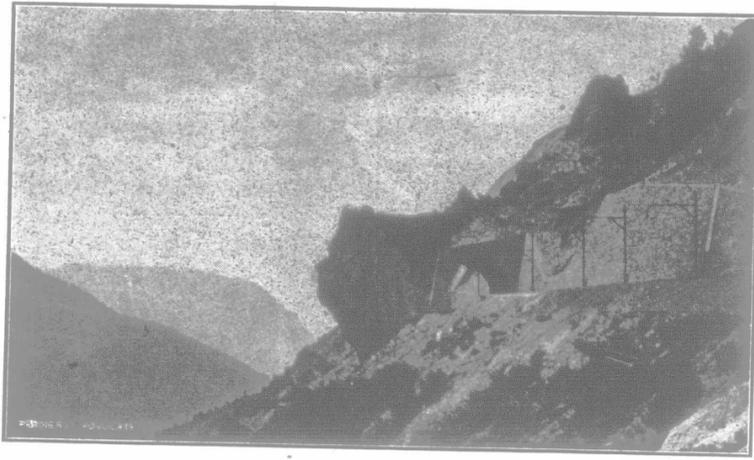
Brique being a frontier town, no military internes are allowed there, but it was full of Swiss soldiers, and there were about three hundred French and Belgian civil internes. They were the most dismal-looking, dispirited lot of men I ever saw, we talked to some of them and they told us that they were nearly all suffering from stomach troubles, the result of poor food and bad treatment in the German camps. No wonder they looked dyspeptic and wretched.

When the wounded soldiers were first interned in Switzerland, the French prisoners were sent to French-Switzerland, and the German to German-Switzerland; but that rule is no longer adhered to. In Lucerne there is a hospital where wounded soldiers of all the nationalities interned in Switzerland are sent for special treatment.

Spiez, where we have been staying for some weeks, is full of French and Belgian military internes, and there are also a great many civilians, many of them mere boys. These boys were students in Germany at the outbreak of the war. All the civil internes are obliged to wear a tri-color band in the colors of their country, on the left arm. The great number of French civilian internes are accounted for by the fact that they come from the invaded districts of France. It is said that among them are many men of the criminal class who at the time of the invasion were serving sentences in the French jails. The Germans opened the jails, arrested the inmates, and counted them in their lists of prisoners of war.

The uniforms of the French soldiers vary a great deal; there seems to be absolutely no limit to the combinations worn: One sees white coats and blue trousers; blue coats and white trousers; uniforms that are all blue, or all gray, or all khaki; but the one most universally worn consists of a light gray coat, red trousers and red cap.

As for the officers they are too gorgeous for words. In this hotel there are fifteen, and no two of them wear the same kind of uniform. On Sundays they all appear in their most resplendent attire, with strings of medals dangling on their coats. They are very affable and charming, these French officers, and invariably polite. They mingle freely with the guests and amuse themselves in various ways. Some of them are putting in the time studyin' English. This, by the way, is a favorite occupation of French interned soldiers at present. One of the officers in our hotel is a remarkably clever cartoonist. Another one is an expert in macrame-work, an art which he acquired while a prisoner of war in Germany. He has been instructing some of the ladies, and consequently macrame-work has become very popular. Another officer spends several hours a day practising on the piano. I noticed that most of his music was by German composers, and one day I said to him:—



Victoria Rock, on the Loetchberg.

So named from the resemblance to the head of Queen Victoria.

no less than 32 tunnels, 22 bridges and viaducts, and a number of avalanche galleries. The tunnels are of all lengths, the passage through them varying in time from two or three to twenty minutes, but as the road is electric, and therefore smokeless, and the cars brilliantly lighted, tunnels on the Loetchberg have no terrors. In fact, they are rather an advantage than otherwise, as they give one an opportunity to read up between scenes, or, to shut the eyes and rest.

Uncle Ned, in order to be fully informed regarding the wonders of the road had equipped himself with a set of Loetchberg Guide-Postcards, bound together like a book, with descriptive inserts in three languages. The English text was sometimes very queer and complicated. During our progress through the longer

Julia, and she kept her head turned the other way. After we had passed through the Hohen, which is the last of the long tunnels on this route, Uncle Ned gave up reading extracts. There was too much to look at. We were rushing along high up on the mountain slope, and down below us, far, far down, was the great valley of the Rhone, divided in the center by the swiftly flowing river. The view was vast and magnificent. One felt inclined to give utterance to some fine-sounding Byronic phrases. And what did Uncle Ned say? This was the unpoetical remark he made as he looked down on the Rhone valley:—"Mother Nature's patchwork quilt!"

But there was a lot of truth in what he said, for the valley is as flat as a table, and so completely covered with little

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"Evidently, you have no objection to German music."
"No," said he. "Music has no country."

Now that so many of the internes are well enough to work they are getting restless and pining for something to do. In the neighborhood of Spiez some of them are working in the fields and on the roads, and one civilian is managing a market garden.

How to keep the internes employed is becoming quite a problem. Satan being proverbially expert at finding occupation for idle hands, something has to be done to outwit him. So, the authorities are making arrangements to enable the internes to do the kind of work for which they are best fitted. In fact, all those who are well enough will be obliged to work. Some of them who are studenst, will be allowed to continue their studies at the Swiss Universities.

Every few weeks the internes in Spiez give a "show" for which a small admission is charged. At the last performance there were some excellent singers, and an orchestra made up of internes; there was also a one-act comedy, which was splendidly acted and much applauded. As the white-haired colonel at our hotel says:—

"We must have something to make us laugh. It isn't good to be too serious."

What the Women Said and Did in London, Ont.

(Concluded.)

Food Products at Present Prices.

An outstanding feature of the evening meeting of the Women's Institute Convention, held in the Masonic Temple, Nov. 8th., was an address by Professor Harcourt, head of the chemistry department of the Ontario Agricultural College. He spoke on a subject that is of especial interest at the present time:

In introducing Prof. Harcourt, Mr. Roadhouse said that he was going to solve for us the problem of the present high cost of living. Professor Harcourt protested that the order was a rather large one, but trusted that something might be gained by the audience from a comparison of the comparative cost of foods used to-day according to their food values.

At the beginning of the lecture the accompanying sheets (see diagram) were handed about among the audience for reference.

We value food, said Prof. Harcourt, according to four things—protein, fat, carbohydrates and ash. The plant can create all these by taking up and elaborating the simple things about it in soil and air. Protein is the flesh-forming constituent in foods. From the carbon dioxide that we exhale in breathing, or that is formed in burning etc., the plant can construct the sugars and starches (carbohydrates). With all our knowledge of chemistry we cannot do this that the plant does, for instance storing starch in the wheat grain and potato tuber. Other plants take carbon dioxide and build it into complex fat substances.

Protein is the constituent in our food that forms flesh and keeps the body in repair, and the proteid foods are those that cost us most money e. g. meats.

The fats and carbohydrates are heat and energy formers. They are taken into the blood and burned to give us energy to do work. When we want to do work cheaply we get it out of carbohydrates, but the horse or the person, to have spirit and vim, must have protein too. A growing person needs more protein than the grown person, who does not need to form new flesh but only to keep up repairs.

When we analyze foods we find one rich in protein, another in carbohydrates and another in fats, and in order to compare the relative food value a unit called the calorie, based on fuel value or power to do work, has been adopted. We take as a basis the number of calories. The cheap foods are those in which the protein is as low as possible and yet contains enough for the needs of the body.

Prof. Harcourt here called attention to the distributed page, by which could be seen that rolled oats will give us more calories for the dollar of expenditure than any other food listed. The cereals are all at the top, the meats—which



View of the Rhone Valley, from the Loetzbberg.

are the expensive foods—at the bottom. The second column gives the unit of protein that would be in what one could buy for a dollar. By comparing the list we can see how much protein we get for our money. Rolled oats stand high in energy-producing power and protein; skimmed milk is the cheapest source of protein we have, and buttermilk next. Cereal foods, then, along with milk as a source of protein, are our cheapest foods, and it is to be remembered that a pound of digestible protein from one source is just as good as from

Protein, Fat, Carbohydrates, and Fuel Value of One Dollar's Worth of Each Food..

	Price	Protein lbs.	Fat lbs.	Carbo-hydrates lbs.	Fuel value calories
Rollled oats.....	\$.05 per lb.	2.5	1.36	14.3	36,950
Fall wheat flour.....	4.80 " cwt.	2.0	.02	15.8	33,950
Corn meal.....	.05 " lb.	1.31	.25	16.26	33,735
Farinas.....	.05 " lb.	1.9	2.0	15.6	33,394
Spring wheat flour.....	5.35 " cwt.	2.2	.02	14.00	30,216
Rollled oats (package).....	.25 for 4 lbs.	2.00	1.09	11.5	29,560
Sugar.....	8.00 per cwt.			2.5	23,250
Farinas (package).....	.15 for 2 lbs.	1.26	1.33	10.3	22,207
White bread.....	.16 for 2 1/2 lbs.	1.31	.31	7.6	17,905
Buttermilk.....	.10 per gallon	3.0	.50	4.8	17,362
Skimmed milk.....	.10 " "	3.4	.30	5.1	17,070
Potatoes.....	2.25 " bag	.97	.5	7.0	16,930
Malta vita.....	.10 " 12 oz.	.74	.10	5.87	12,716
Toasted Corn Flakes.....	.10 " 12 oz.	.42	.11	6.06	12,517
Grape Nuts.....	.15 " 17 oz.	.81	.07	5.56	12,143
Milk.....	.08 " qt.	1.04	1.27	1.66	10,402
Shredded Wheat.....	.13 " 12 oz.	.66	.05	4.42	9,659
Beef, flank.....	.14 " lb.	1.21	1.36	—	7,970
Butter.....	.45 " "	0.02	17.6	—	7,704
Cheese.....	.30 " "	.93	1.22	1.4	7,138
Mutton chops.....	.24 " "	.56	1.20	—	6,106
Ham smoked.....	.28 " "	.51	1.19	—	5,963
Beef, sirloin.....	.25 " "	.66	.90	.65	4,000
Beef, round steak.....	.24 " "	.79	.53	—	3,718
Lamb, hind quarter.....	.27 " "	.61	.60	—	3,672
Ham, smoked and cooked.....	.45 " "	.44	.50	—	2,930
Eggs.....	.48 " doz.	.37	.29	—	1,912

One Dollar's Worth of Foods at Old Prices.

Spring wheat flour.....	\$3.00 per cwt	3.90	.03	25.1	55,000
Rollled Oats.....	7 lbs. for 25c.	3.5	1.9	20.0	51,730
Farinas.....	6 lbs. for 25c.	2.3	.24	18.7	40,070
Potatoes.....	90c. per bag	2.18	.10	15.6	33,492
White bread.....	2 1/2 lbs 10c.	2.10	.5	12.2	28,710
Beef, flank.....	8c. per lb.	2.12	2.37	—	13,944
Cheese.....	17c. per lb.	1.63	2.16	.24	12,593
Beef, sirloin.....	18c. per lb.	.92	.90	—	5,509
Eggs.....	25c. per doz.	.79	.56	—	3,853

Proteins are the flesh formers. Fat and Carbohydrates are fat formers and heat and energy producers. Fuel value—It is now generally considered that provided there is enough protein in the diet, the power of the food to produce heat forms the best basis upon which to compare the value of the foods. The last column, therefore, shows the relative value of the foods, assuming that there is enough protein in the diet to do the work required of it.

another—as good from cereals as from meats, although the meats are more digestible. Comparison of eggs and meat depends on price. When a dozen of eggs sell for the same as a pound of sirloin, eggs are the cheaper food.

Potatoes at \$2.25 a bag stand well up in the list. Milk at 8 cents a quart is cheaper in food values than the meats.—the figures in the list will stand study.

In reply to a fire of questions Professor Harcourt said: (1) That cream with oatmeal adds to the food value, as also do milk and sugar. For some, milk and oatmeal may be too rich in protein, the individual must study his especial needs. Cornmeal and milk present a better balance and a very excellent food. (2) Boiling oatmeal for 8 hours as often recommended increases its solubility, and, for most people, improves its flavor and consistency, but experiments have shown that there is not 1 per cent. difference in digestibility whether boiled 20 minutes or 8 hours. (3) Skimmed milk is very digestible and very nutritious. We give it to stock and it makes good pigs and calves; it also makes splendid children. It is one of our cheapest foods. It supplies protein; the oats and bread with which it may be served supply the necessary fat and carbohydrates. (4) Cornmeal and wheat farina do not need as long cooking as oatmeal to secure solubility.

Upon the whole, Prof. Harcourt said, we could live on about one-tenth of what we do, if we were contented to leave out the frills that tickle the palate.—Whereupon a voice called, "I wonder how long the men would stand that?"

To the question as to whether whole-wheat bread is better than white bread the lecturer replied that it depends wholly on the individual. We get more nourishment from white bread, but some people require the coarser.

In closing Prof. Harcourt said that he did not advocate doing without meat; he merely thought that many of us could do with less. By considering real food values we can pick out those foods that will supply our requirements at a greatly reduced cost.

Mrs. Gordon Wright of London gave a short talk on the Emergency Corps in which women may enlist to release men to go the front.

Lieut. Col. Brown, who has been months at the front but is now training men in London, made a statement that we publish with much pleasure. He had been asked repeatedly if supplies sent for the soldiers by the Red Cross were being sold in Flanders. To this he could only reply by an emphatic NO. Supplies are being given free, "and," he added, "I only wish you could see the appreciation on the faces of the men when they get them."

Address by Major Thompson.

Major Thompson, a returned chaplain, who had come from Ottawa to speak at the Convention, delivered a very stirring recruiting speech. Young men of military age, he said, should not be seen here in audiences in such numbers. In Britain, if not at the front they are working hard at munitions.

The Women's Institute, he believed, would find a great work in many ways when the war is over; soldiers will come thronging back, and many of them will want to do out-of-doors work and will go to the country. A definite helping hand must be extended to them by both people and Government else they may prove an acute problem.

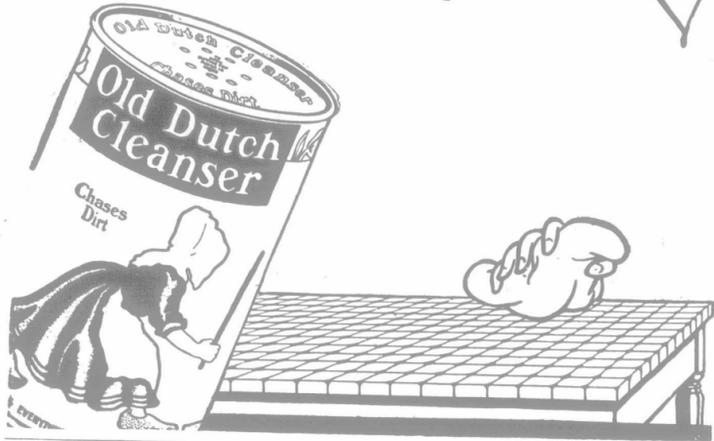
Major Thompson gave much praise to the great work the women of Canada have done; but some of them, he said, have not yet seen clearly what the struggle means, and are holding back their contributions. No greater handicap for his future can be put upon a young man than to hold him back in this day of world crisis. The Chief of Staff of Britain has told us that we will need to devote all our men and all our resources. The more we send now the smaller our loss; the longer we wait the longer the suffering and loss.

Our splendid boys at the front are proving themselves perfect men and perfect gentlemen. Sometimes even the "black sheep" are covering themselves with distinction, as did three glorious "scalawags" at Festubert. He admired the spirit of one old mother who had five boys at the front and whom he had met recently in her wheel chair. "If I were a man, by jingo I'd go too!" she said.

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of Lobo, as modest and unassuming as they have proved themselves brave, followed with short addresses on their experiences on the battle line, dwelling chiefly on the grand work of the Red Cross workers and the doctors and nurses who are making shattered men as whole as possible again. "My greatest message to you," said Pte. Jackson, "is that your boys are splendid, going through hardships that you cannot imagine, with smiles and jokes,—and they are going to stick to it until the war is done."

Pte Fleming emphasized what Col. Brown had said in regard to Red Cross socks. "The report that they are being sold at the front," he said, "is absolutely false." He had never had to buy a sock, and never saw anyone who had done so.

A Busy Session.

On Thursday morning the reporters, on coming to the hall, found Mrs. McKay presiding, and the Convention deep in a discussion on what might be called the "family affairs" of the Institute—even to the "money troubles." Almost everything came in for a word,—payment of secretaries, raising money and more money for various purposes, serving refreshments at meetings or not, et cetera ad infinitum. To the complaint that sometimes people brought inattention to the meeting by talking in cliques someone suggested that the usual secret of inattention is that the speaker does not make herself heard. . . . Dr. Backus recommended more use of the Institute hand-book and parliamentary procedure in the meetings. . . . In regard to a question regarding laws affecting women and children, recommendation was given to a booklet by Mr. Kelso "Social Laws of Ontario," sent free by the Department of Dependent and Neglected Children, Parliament Buildings, Toronto. . . . In reply to a query in regard to getting run out of subjects at local meetings, "Current Events" was suggested as a never-failing topic to be worked in along with home and community problems. Dr. Backus said that at the Ottawa Convention it was told that good results had come from exchanging programmes and local speakers. "Be big," she said, "send your ideas about you. The world is crammed with problems, so there should be no need to worry about topics" In regard to the difficulty in securing enough funds a member said that not only the war but worms, bugs, too much drought at one part of the growing season and too much rain at another, have affected the prices of farm products. Although prices are high, some farmers have little to sell. To which Mr. Putman responded that the dairy farmers have profited by the war and as a rule could give more. He knew very well how hard it often is for farmers in general to secure great profits from their work.

Address by Dr. Margaret Patterson.

Dr. Patterson, who made a markedly favorable impression on her audience, spoke on the subject this year nearest the hearts of the Women's Institute,—Red Cross work. Speaking from a very close connection with the work indeed, her own heart was in what she said, and many times during her address the eyes of those who listened were blinded with tears.

She began by contrasting conditions now with those that existed at the beginning of the war, dwelling particularly on the battle of the Marne and the long retreat from Mons. Then the wounded men, with little care, had to be jolted along on carts and cattle cars on beds of straw; bandages, antiseptics, supplies of all kinds were sadly wanting. To-day there is still vast suffering, but thanks to the Red Cross and the C. W. C. A., the best of care can be given. . . . She could tell her audience from Mr. Noel Marshall, that 60 per cent. of the made-up articles at the Red Cross Headquarters had been made by members of the Women's Institute. Nevertheless, if we set ourselves to it still more could be done. We cannot do too much for the men who have gone out to stand between us and conditions such as those in Belgium. We should remember what speedy aid means and send all the help in our power. When men are at the last ebb, a little loss of time may mean death; speedy aid means saving life and limbs.

By our help, saving just so much Government aid, we are keeping down taxes, but that is a small matter. Life means more than property,—and, too, things made for love's sake mean so much to the men. Home-made things are not

only better, but mean so much more than Government store room things to the boys in the trenches, especially when a little personal message accompanies them. It is not allowable to send letters with articles, but short messages, or conundrums, are permitted. These give the men something to think about. From one work-room in Toronto, whence thousands of shirts have been sent out, a conundrum was pinned to each. A budget of letters came back telling about what fun the boys had had in trying to guess them, and one youth, confessing his inability to choose the right answer concluded,

"I to the Hills will lift mine eyes,
From whence doth come my shirt."

The point of the joke was that the work-room is in charge of a Miss Hills.

The work must go on with redoubled effort. The "S. O. S." cry is going out continually from the trenches and may be interpreted "Send Our Socks." Above all things socks are necessary, for, as has been said, "A man is no stronger than his sores foot."

The speaker wished to say to the women that they must not be discouraged if they did not receive direct, personal thanks for their work. Often the men cannot write when in the trenches, and the slips of paper with addresses, after being carried about for days, perhaps soaking wet, become quite illegible.

The fable about socks being sold at the front, she said, had been due to German effort to stop the women of Canada from knitting. "Aren't you proud," she asked, "that the Kaiser is afraid of your knitting needles?"

Surgical dressings and bandages are not now asked from us because they are being made as needed right at the front, but the call to us is still insistent for socks, pajamas, shirts, warm slippers, etc. Flannellette pajamas should be washed before sending them away, as washing them makes them less inflammable.

Another duty that should fall on the women is to keep up an interest in the men who return to us maimed or blind. She thought an especial Institute for blind soldiers should be started; it is scarcely fair to our soldiers to ask them to be taught in the same classes with children at our one institution for the teaching of the blind. One thing we can do at once. The blind men are craving books (Braille); we can see to it that they have them. Above all things they want a good history of the war.

As yet we have not done all we can; and we should remember that just in proportion as we make sacrifices so we ourselves are helped.

In passing she paid tribute to the work of the Y. M. C. A. at the front. Soldiers had said to her "If it weren't for the Y. M. C. A. tents we'd all go crazy." These places afford relaxation from the terrible strain, a place to write letters, and read, and have a cup of cocoa or coffee. We of the W. I. can help through the Y. M. C. A. too, if we choose.

She thought it only a superficial love in any mother who would keep a son home from the front at this time.

In reply to a question as to why some parcels had not gone through, when every letter was received, Dr. Patterson said that probably the parcels were not properly packed.

To another question asking what per cent. of Red Cross money goes to pay salaries, she said only 3 per cent. and that included transportation and other expenses. She herself had spoken 400 times for nothing. Mr. Noel Marshall receives not one cent for his great services; and she could mention many others who are working in the same way.

She also said that arrangements are being made to send individual parcels to prisoners of war in Germany. Parcels may be sent to the nearest Red Cross receiving station.

Medical Inspection of Schools.

At the afternoon session, Miss Sills presiding, Miss Hotson of Parkhill spoke on the above subject, one of especial importance now since, in the words of the speaker, "our people and the children of our people must be strong to meet the responsibilities that will come after the war." During the past year something has been done to help on this work; many branch Institutes have had discussions on the work; Rural Health Conferences have been held at Guelph and Toronto, and

NOVEMBER

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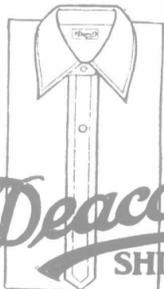
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Dr. Hill and others have given addresses.

About the time of the Convention last year a clinic was held at Ailsa Craig. Everyone helped. One lady turned over her house, cots were put in, and one room turned into an operating room for children—all this done by Institute women. Then the children, (24 of them) were brought, examined by doctors and nurses, and several were treated for adenoids.

In Lambton County medical inspections have been made, and the nurse has sent cards to the parents of children needing attention. Also arrangements for a dental clinic have been made. In Gravenhurst district 400 children were found to need care and were recommended to go to their family physician; and in July a clinic was held and several operations performed. As the result of this one child who could not talk found speech.

In the Hespeler branch, where inspection has been introduced, a record of children examined is kept by a regular card-filing system. If necessary, the child takes its report to a doctor; ordinarily to its parents.

Other places were also mentioned including Dundas, New Liskeard, Woodstock and Owen Sound.

Nevertheless, thousands of children are still suffering for want of medical care. The Women's Institute branches in some districts have shown that they are able to direct this movement, then why not in all?

Work of C. W. C. A.

Mrs. A. T. Edwards of London, spoke on the work of the War Contingent Association, thanking the Institute for the assistance it had been able to offer. Shipments are being made direct from London to the coast, therefore the women of Western Ontario need not fear in regard to their work.

Just now a plea has come for helping the Navy. We are not being told all that the Navy is doing, but we should understand.

The C. W. C. A. is working in conjunction with the Red Cross. She hoped the delegates had all seen the work shown at Hyman Hall, where some new features were to be noted, especially the sleeveless sweaters to be worn under the coats, and the new warm head coverings, both so much better than the long scarfs made at first. 3,100 Christmas stockings had been sent from Hyman Hall, also 50 extra cases of Christmas gifts.

An important announcement made by Mrs. Edwards was that a Tuberculosis Hospital for soldiers is to be established at Byron in the near future. Nine hundred soldiers have already returned with this disease, and must have immediate care. The Dominion Government has promised \$25,000; the Provincial Government \$25,000; it is hoped that the City will add \$25,000;—and the women of Western Ontario are asked for \$15,000 for equipment. Cots and wards will be named after any places that supply them to a certain value. More will be told of this in a few weeks.

In closing Mrs. Edwards asked the women to take any criticism in regard to their work kindly, as it was meant, and only for the good of the boys in the trenches, who have unusually hard conditions for their feet, and who may be injured by lumpy toes in their socks.

A delegate from West Lorne, Elgin Co., (was it Mrs. Sims?) next gave reports. In West Lorne, out of a population of 8,000, 75 men are now on the firing line. In raising money, socials, etc., had been found to involve too much labor for the returns, and so resort to monthly collections had been made, and was found more satisfactory, \$90 and more being collected every month.

At a Fall Fair considerable money had been made by a Guessing Contest on how many grains of corn there were in a jar. The prize for the nearest guesser was a pair of White Orpington chickens. Money had also been made by collecting and selling old papers and rags. At Dungannon a play had been given by a dramatic club. Money had also been realized by the sale of patriotic songs and the serving of meals by the W. I. at the Fair. An autograph quilt brought \$65. At Stratfordville the school children are going to canvass for money.

Mrs. Edwards, Komoka, expressed the gratitude of the Association to the military men who had helped at the evening meeting, to all those who contributed

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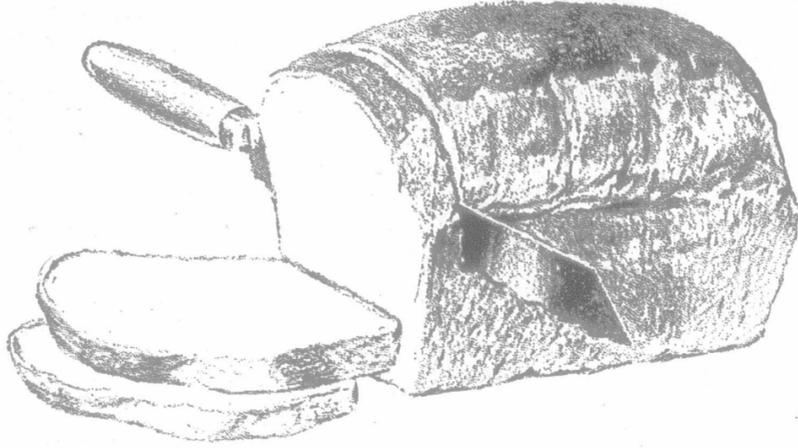
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music, to the Women's Canadian Club and especially to Mrs. A. T. Edwards, to the Mayor of the city and the City Council,—for their great kindness to the visiting delegates. In her report she also dwelt on the necessity for taking criticism kindly. "Don't be knocked out at the first shot," she said. . . . Good reports were presented from Forest, Corunna and neighbouring places, and further work was urged. In the present crisis we must consider "not what we keep but what we give". . . . Mrs. Edwards, by the way, deserves much credit for her help in getting up the programme, and the thanks of the Association were expressed to her.

Mr. Putnam announced the intention of the Department to enlarge on Garden Contests, and to incorporate with it contests in canning and preserving. Seed will be sent for 10 or 15 in each branch. He also gave information in regard to the splendid work done by the Demonstration Courses.

Resolutions.

When all has been said, perhaps the Resolution Committee has as difficult a task as any at the Convention. It is its duty to boil down all that is most important, and so present, for the endorsement of the members, the very kernel of the sessions.

The following are the resolutions of this convention read by Miss McIntosh of Parkhill. They will be presented to the Government

(1.) "Whereas the Women's Institutes of Ontario have long been convinced of the urgent need that the Provincial Government should make better provision for the segregation and education of the feeble-minded.

"And whereas a feeble-minded exhibit held in Toronto last spring brought prominently to the attention of the public, the cost in money, the misery, and the appalling amount of crime resulting from our neglect of the feeble-minded, and whereas there is a grave danger that many feeble-minded people

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Mention "Farmer's Advocate"

will wish to immigrate from Canada from Europe at the close of the present war. "Be it resolved that the Women's Institutes of Ontario assembled in convention at London this ninth day of November, 1916, heartily indorse all efforts being made at the present time to secure a Government commission to investigate the whole problem of the feeble minded, and (2) desire that, if necessary, there be direct taxation imposed on the province for more adequate care of the feeble-minded."

Encourage Girls.

(II.) "Whereas the department of education, recognizing the urgent need at this time for larger production on our farms, last summer allowed their year's academic standing to boys, who, having obtained a certain percentage in their term work, left school early to do farm work.

"And whereas it is rumored that the department of education is planning to make a similar allowance for girls next year in order to encourage them to engage in work on farms, whether within doors or in light farming out of doors.

"Be it resolved that the Women's Institutes of Western Ontario, assembled in convention at London, this ninth day of November, 1916, desire to indorse such action on the part of the department of education, and to recommend that the department also make allowance for work in domestic science, gardening, bee-keeping, etc., carried on by girls in villages and towns."

Health of Children

(III.) "Whereas during the last four years the people of rural Ontario through public gatherings in towns and villages and country places, through Women's Institutes, district and provincial conventions, through trustee boards, boards of education, boards of health, town and county councils, and through resolutions addressed to their representatives in parliament have asked that attention be given to the health of children through medical-dental school inspection, and whereas branch and district Women's Institutes, with assistance given by the Institute branch of the department of agriculture, the help of a grant for treatment, from the department of education, and services of medical health officers supplied by the provincial board of health, have successfully carried on through their own schools inspection of rural children who would not otherwise have been attended, and in some instances holding clinics and securing the services of specialists for children requiring minor surgical treatment; and whereas both the wish of the people to conserve the child life in rural Ontario, and the practical way in which conservation may be accomplished, have been clearly shown.

Want a Grant.

"Therefore, the representatives of the Women's Institutes of Western Ontario assembled in convention this 9th day of November, 1916, earnestly request that the Provincial Government set aside a special grant for the continuation and extension of rural medical school inspection and treatment in different health districts in the province by making further provision for medical services and nurses, and the Women's Institutes hereby agree to give necessary local assistance, financial and otherwise."

Smiles.

Why, of Course.—A soldier whose head and face were heavily swathed in bandages, and who obviously had had a bad time, was being feelingly sympathized with by the solicitous lady.

"And were you wounded in the head, my poor fellow?"

"No, ma'am," Tommy replied. "I was wounded in the ankle, but the bandages slipped."—Tit-Bits.

Rev. Russell Day, a famous Eton master, once ordered a boy to stay after school; but, when the hour came, he himself was in a better temper. "What may your name be?" Mr. Day asked of the prepositor. "Cole, sir," replied the boy. "Then, my friend," said Mr. Day, "I think you had better scuttle."

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Hope's Quiet Hour.

To All Their Dues.

Render therefore to all their dues: tribute to whom tribute is due; custom to whom custom; fear to whom fear; honor to whom honor. Owe no man anything, but to love one another.—Rom. 13:7, 8.

Life would be easier for everybody if we always paid our debts promptly. It is the accumulated weight of man unpaid accounts that usually causes business firms to fail. Many people seem to think it is not necessary to be very particular about returning a quarter or a dime, borrowed from a friend. Yet the same person who has a habit of forgetting to pay trifling debts would be horrified at the idea of stealing small sums out of his friend's purse. If the money is not ours, and we are making no attempt to return it to the owner—is it not practically stealing? Of course, it is easy to say, "I forgot!" But at least we should try to remember.

Debts are of many kinds. But, if we would be honest in God's sight and able to look unashamed into His face, we must try in real earnest to obey the command: "Render therefore to all their dues."

One thing we should be especially careful about, and that is to deal justly and fairly with those who work for us. We have no right to grind them down to the lowest possible level of wages; nor have we any right to grind out of them the utmost possible amount of work in return for their wages. We are bound, in honor, to give them their dues in the matter of money, rest and recreation—not to speak of good food and plenty of it.

In this morning's paper I saw a statement that the Germans were "making slaves of the Belgians." Let us be careful never to make slaves of the men or women who are employed by us. Sometimes we ought to render to them rather more than they can legally claim as their right, if it is only to remind ourselves that we all belong to one family. We don't forget to give a present to a brother at Christmas time—and all of us are brothers and sisters.

Do you remember how Dickens, in "A Christmas Carol," showed the ugliness of exacting every cent we could possibly claim? It was Christmas Eve, and Scrooge said grudgingly to his over-worked and under-paid clerk: "You'll want all day to-morrow, I suppose."

"If quite convenient, sir," was the meek reply.

"It's not convenient, and it's not fair," said Scrooge. "If I was to stop half a crown for it, you'd think yourself ill-used, I'll be bound."

As he couldn't help himself, he submitted, saying, "Be here all the earlier next morning."

Then the spirit of Christmas past took the close-fisted, rich man back to the days when he was a poor lad. His employer, "Old Fezziwig," as the apprentices affectionately called him, called out, "Yo ho, my boys! No more work to-night. Christmas Eve, Dick. Christmas, Ebenezer!"

After a glimpse of that jolly Christmas party which had filled his heart with loyalty towards his employer many years before, Ebenezer Scrooge began to wish that he had been a little more genial towards his poor clerk.

When our turn comes to look back at our earthly life we shall be very eager to redeem the time—to make good our failures. "Owe no man anything, but to love one another," is the advice of St. Paul. It is our past failures in loving one another that we regret when the Christmas spirit has filled us with goodwill to men. We look back on the year that has just slipped away, and wish we had been kinder, less selfish, less grasping.

It is not a trifling sin to be easily condoned. God has said that He Himself will be a swift witness "against those that oppress the hireling in his wages." He is not only the Judge and the Witness,

but He is the Prosecutor. Inasmuch as we have done it unto one of the least of His brethren we have done it (any injustice or unkindness) to the King of Kings Himself.

He has warned us: "Thou shalt not oppress an hired servant that is poor and needy, whether he be of thy brethren, or of thy strangers that are in thy land within thy gates. At his day thou shalt give him his hire, neither shall the sun go down upon it; for he is poor, and setteth his heart upon it: lest he cry against thee unto the Lord."

Perhaps one reason the young people prefer to work in stores and factories, rather than in private houses, is because they know they will get their wages as soon as they are due. "At his day thou shalt give him his hire," commanded Moses, thousands of years ago; and the law of love—the Golden Rule—is still pressing home the command. It may not seem a matter of much consequence to the master or mistress to pay wages the day they are due, but it is a matter of importance to the person employed. God does not forget pay-day, and He expects us also to remember.

Then there are others, nearer still, who are often refused their just rights. A hired servant has to be paid or he will not work. Think of the young men and women who are working very hard at home, and have to ask for every dollar—yes, even every "quarter"—they receive! They have earned it over and over again; and yet it is doled out grudgingly, very often, as a "gift." No wonder the young people escape from the grinding work and poor pay at home, to work for regular and just dues elsewhere. When money is scarce at home they are ready and willing to do their part, and more than their share. I know young boys and girls, just out of school, who bring every cent of the week's pay to "mother," and accept an occasional dollar out of their own money as gratefully as if it were a gift. But if the young people are, without sufficient reason, deprived of their just rights, they will learn very little honesty or generosity. Give love, and love will come back to you in overflowing measure. Any kindness shown to the least of Christ's brethren is accepted by Him as a gift—a Christmas gift—to Himself. He will not remain in debt to anyone.

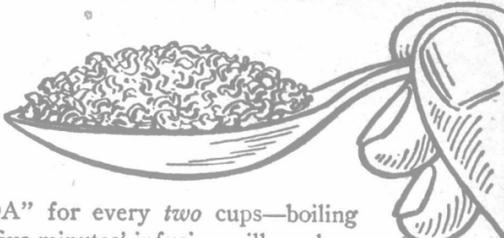
"Owe no man anything, but to love one another." Love does not count every cent, in fear of giving a little too much. It was not Mary, but Judas—not the giver but the looker-on—who counted up the value of the precious ointment and said that it was "wasted."

We owe to others a debt of kindness—kindness in word as well as act. Many who are generous and kind to the poor who are not working for them never seem to think of treating with equal consideration their own employees. How few ever think of paying the woman who has been washing or housecleaning all day a little extra money, and sending her home cheered and happy! Perhaps she has a lot of children to feed and clothe out of her hard earnings. Do you try, if possible, to engage someone to work for you who has "only herself to keep," and is willing to take "starvation wages?" When people are forced by circumstances to accept less than their work is really worth, are we willing to "steal" their precious time and strength?—for that is what it amounts to if we don't try to render to them their dues.

There is another debt too often left unpaid—the debt to the home-maker. Think of the many unselfish women who are toiling cheerfully year after year to keep the house tidy and the meals going! The pay she cares most about is the affectionate appreciation that she deserves. The man who never mentions the meals, unless it is to find fault, is not rendering the thanks due to the cook. If the cook is working for love instead of money, she deserves all the more gratitude. In many homes the weight of the housework bears heavily on the mother, and the husband and children often accept all her toil as a matter of course. When the long strain breaks down her strength, and she is unable to keep everything up to the usual standard, they are inclined to feel injured. Would husband and children be quite so ready to blame and slow to thank the tired woman who is being made the slave of the household, if they remembered that she, whose just rights were so persistently disregarded, might—"happen to be God."

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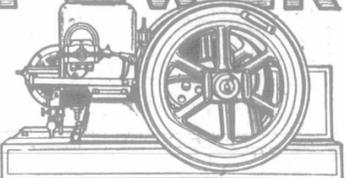
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Sodas

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For full information as to terms, regulations and settlers' rates, write to:

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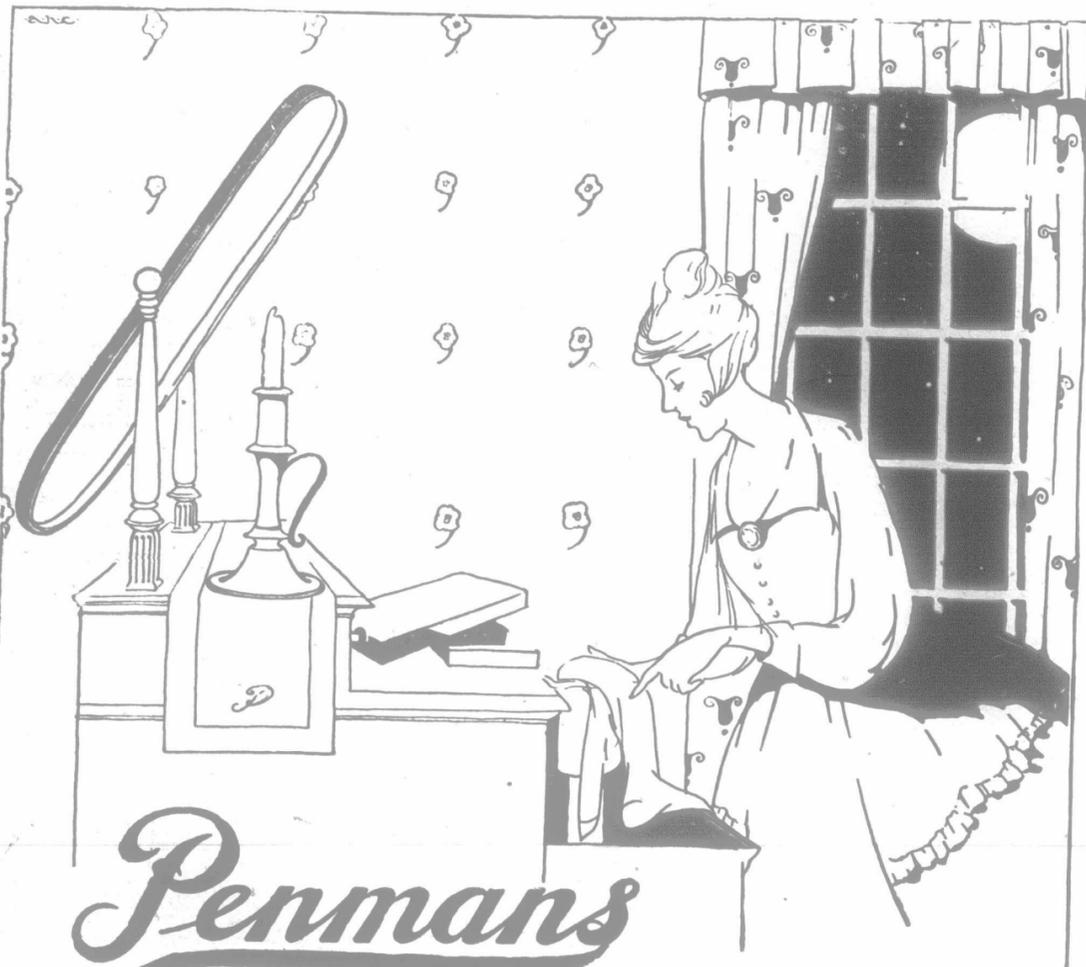
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HOSIERY gets real wear on the farm, climbing in and out of buggies — and so on. Penmans appreciate this, and make hosiery that will W-E-A-R. At the same time there is a smartness of finish about them, a snug fit and a velvety feel that you'll like. Of course, you probably wear Penmans all the time, but this little message is passed along in case you do not—an unfortunate state you should remedy next time you buy hosiery. After you've tried Penmans you'll be very glad you read this. Don't forget—Penmans.

Penmans Limited
Paris

The following lines were written by one of our readers.

What of the Harvest of Souls?
Cometh the night with its stars,
Cometh—so still;
Silent the wheels of the wain,
Silent the will.

The light of the beacon burns
Across the bay
For mariners sailing home
From far away.

Faintly, beyond the hills,
The bell of the mission tolls—
Oh, Fathers! what of the day?
What of the harvest of souls?
ERNEST H. A. HOME.

The Dollar Chain

A fund maintained by readers of "The Farmer's Advocate and Home Magazine" for all the needs brought on by the war.

This week we have an interesting announcement to make. Some time ago Mr. Harold Weld, of Winnipeg, formerly a member of our staff in London, said, "When your Dollar Chain reaches \$3,000 I will give you a cheque for \$30." This cheque has now been received, and, with several other splendid donations, helps to bring the Chain well towards \$3,100.

Are there any among our readers who would like to offer \$40 when the \$4,000 mark is reached? If so, kindly write us.

Contributions from Nov. 10 to Nov. 17: Harold Weld, Winnipeg, \$30; Mrs. Arch. Wilson, Owen Sound, Ont., \$1; Wm. Partington, Magog, Que., \$2; "Willing Workers," North Pelham Pres. Church, \$14; Wm. May, Goodwood, Ont., \$5; C. J. H., R. R. 1, Wilton Grove, Ont., \$5; John Wilcox, R. R. 2, Glanford Sta., \$10; "Margaret," Durham Co., Ont., \$2.

Previously acknowledged.....\$3,024.00

Total to Nov. 17.....\$3,093.00

We cannot close without giving you an extract from a letter received, with \$5, last week. The writer says:

"I am a widow, 57 years old, and earn my own living. If I were rich I'd give more. I am thinking of teaching some girls to knit socks for the soldiers." Surely this letter should be an inspiration for us all.

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

Current Events

Hon. J. S. Duff, Minister of Agriculture for Ontario, died suddenly at Alliston on Nov. 17th.

Mr. F. B. McCurdy is for the present acting head of the Militia Department at Ottawa. Sir Sam Hughes, following his resignation as Minister of Militia has gone to his home at Lindsay for a short rest.

Sienkiewicz, the Polish author, whose most widely known book is "Quo Vadis," died in Switzerland last week.

A French aviator, Captain de Beauchamp, on Nov. 17th, dropped bombs on the station at Munich.

Germany is steadily deporting Belgians and forcing them to work in Germany to release soldiers for the army.

A drastic move to suppress the manufacture of intoxicating liquor in Great Britain is to be introduced in the British House of Commons.

Frederick Palmer, war correspondent, says that the fighting on the Somme has had only one parallel in history—Verdun. So far, in the terrific, continuous battle, 1,500,000 men have been hit. It is stated that scout airmen have reported that Germany is protected by about 8 miles of trenches and entanglements all along the Western front, and the Allies plan to force wedges through these.

But little that is outstanding is this week reported from the west front. The

HERE is the grocer, polite and urbane,
Now at his counter we stand,
Flour is the subject, our question is plain,
Which is the best in the land?
And he replied with conviction and power,
"I recommend to you ————"

PURITY FLOUR

PURITY FLOUR

More Bread and Better Bread

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show birds; pr
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market, Ont.

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breeders selecte
choice cockerels,
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pullets, two d
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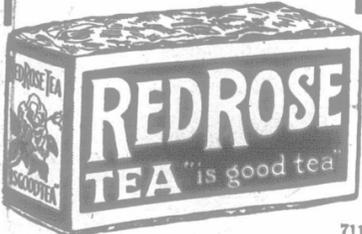
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HASTINGS
W



IT is hard to break the chains of habit. It took one man six months to stop saying "Gee Whiz."

It is astonishing how habit will keep a person asking for "the same as usual" tea long after she has intended to try Red Rose Tea. Why let habit prevent you enjoying this richly flavored Indian-Ceylon blend? Order a sealed package to-day.



711

CALIFORNIA IMPROVED FARMS NEAR Sacramento for sale. Terms. Write for list. E. R. Waite, Shawnee, Oklahoma.

FARM FOR SALE—150 ACRES CLAY LOAM, Lambton County; good orchard, barn 40 x 100, cement foundation; comfortable house, good well water; convenient to school, telephone, rural mail. Andrew Atchison, Alvinston, Ont. R.R. No. 1.

MARRIED MAN, NOT OVER FORTY, TO work farm one hundred miles north of Toronto, stock, fruit and general. Box A, Farmer's Advocate, Toronto, Ont.

WANTED—HERDSMAN FOR HIGH-CLASS Jersey herd of about thirty to fifty head, about to be established in Western Ontario. Prefer man and his son. Wife to assist in milking and butter making. Give full particulars of experience and salary expected in first letter. Address—"Jersey", Farmer's Advocate, London, Ont.

WE REQUIRE PARTIES TO KNIT MEN'S wool socks for us at home, either with machine or by hand. Send stamp for information. The Canadian Wholesale Dis. Co., Dept. S., Orillia, Ont.



FOR SALE—PURE-BRED MAMMOTH Bronze Turkeys. For particulars write Mrs. Jason Trickey, R.R. 2, Mallorytown, Ont.

FOR SALE—TWO PAIR EMDEN GEESE, show birds; prices right. Peter Hord, Parkhill, Ontario.

MAMMOTH BRONZE TURKEYS, BRED from best imported stock; free from disease; large flock; satisfied customers. Order early and get first choice. Mrs. W. R. Armstrong, Newmarket, Ont.

ORDER NOW—UTILITY BARRED Plymouth Rocks—famous O. A. College bred-to-lay strain. Our motto, "Early Maturity and High Egg Production". Flock trap nested and breeders selected on production basis. A few extra choice cockerels, pullets and yearling cocks, for quick November sale. Males, three to five dollars, pullets, two dollars. Prices advance after December 1st. Water H. Smith, Athens, Ont.

RHODE ISLAND REDS (SINGE-COMB)—A few pullets and cockerels for quick sale. Dr. Hendry, Delhi, Ont.

RINGLET BARRED ROCKS—IMPROVE THE laying abilities of your flock. Bred-to-lay strain, strong, healthy cockerels, \$2 each. Satisfaction or money returned. Colclough, Kingston, Ont.

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Why throw away your money to middlemen. We will furnish you, freight paid to your nearest station, this beautiful set of strong and easy running sleighs, usual price \$35.00, for \$23.00. Fully guaranteed, made of the best of material, white oak runners six feet long, two inches wide, spring steel shoeing, well painted, made to last a lifetime. Ask your neighbor about them. For 20 years the Hastings sleigh is known to be the best made, strongest, and easiest running sleigh in the market; you run no risk. Send us a P. O. money-order or your cheque. Address:

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French and British continue to make slight gains along the Somme, and there are indications of a renewal of activity in Belgium, north of the Yser. In the Balkans, the French and Serbs have made a victorious entrance into Monastir. In Roumania, on the other hand, while von Mackensen steadily retires from the Dobrudja, burning villages as he goes, the Roumanians are meeting their Waterloo on the Transylvanian front, where von Falkenhayn, sweeping through the valleys of the Jiu and the Alt, is bearing down upon the Wallachian plain.

The Windrow

Up to the first of November the roll of graduates and under-graduates of Toronto University who have enlisted for active service numbered over 3,200. Of these more than 140 have been killed.

Miss Eileen Lee some weeks ago made a record in long-distance swimming for women by swimming 36 1/4 miles in the Thames River in 10 hours and 17 minutes.

Mr. Arthur C. Benson, whose religious strain comes out in all his writings, said: I have often felt, myself, that the time has come to raise another figure to the hierarchy of Christian graces. Faith, Hope and Charity were sufficient in a more elementary and barbarous age; but, now that the world has broadened somewhat, I think an addition to the trio is demanded. A man may be faithful, hopeful and charitable, and yet leave much to be desired. The fourth quality that I should like to see raised to the highest rank among Christian graces is the grace of Good Humor.

In speaking with Dr. McPherson, headmaster of Lawrenceville School, a few years ago, I asked what characteristics he looked for in choosing teachers for his school. He answered: "First, the sense of humor; no man can live successfully in close quarters with students without a keen perception of the humorous." By this, the head-master doubtless referred to that saving sense of proportion that appreciates incongruities, saves a man from priggishness, undoes superiority, and prevents his solemnity and earnestness from being a troublesome burden to those about him.

For my own part I have never been able to imagine the Christ, clad in those dreary garments of over-whelming seriousness which some of his followers have donned. He was found at weddings and at feasts, the Lord of forgiveness and humanity, wanted not, I believe, that element that lies deep in our human nature—the kindly Grace of Humor.

—C. S. C., in Christian Herald.

An illustration of the mischief a move can do, even in a well-meant direction, is that of the work-girls, "midnettes," of Paris; When hostilities commenced, restriction in all dress was preached, and taken in real earnest by the nations involved. In a very little while the midnettes were deprived of their means of livelihood. Those who were strong enough entered the munition factories, but for those who were not robust enough for this work there was only starvation. Then suddenly they thought of an appeal to American women, and right nobly was it answered. In a week or two money was sent, something like fifty thousand pounds finding its way to France for the girls, with "more to follow," and they kept their word. But this was not all, by any means. Large orders began to flow into Paris from all the big centres in the United States, and very soon the French workgirls were busy again, and have been kept so. That is how so many of the big French firms have been able to hold shows of winter, spring and autumn fashions; and, by the grace of the great-hearted American women, will be able to do so in the future. This is the right kind of sympathy and help, and it has not been wanting in Australia. Ruthless economy means unemployment for thousands; and it would seem as if the time had now come when moderate entertaining might very well begin again. Example in high quarters has been set, and if it be followed it will help thousands of humble workers who have felt the pinch very seriously this winter as there are no munition factories wherein they may earn their daily bread.—The Australasian.

Serial Story

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The Brown Mouse.

CHAPTER VI.

JIM TALKS THE WEATHER COLD.

"Going to the rally, James?" Jim had finished his supper, and yearned for a long evening in his attic den with his cheap literature. But as the district schoolmaster he was to some extent responsible for the protection of the school property, and felt some sense of duty as to exhibiting an interest in public affairs.

"I guess I'll have to go, mother," he replied regretfully. "I want to see Mr. Woodruff about borrowing his Babcock milk tester, and I'll go that way. I guess I'll go on to the meeting."

He kissed his mother when he went—a habit from which he never deviated, and another of those personal peculiarities which had marked him as different from the other boys of the neighborhood. His mother urged his overcoat upon him in vain—for Jim's overcoat was distinctly a bad one, while his best suit, now worn every day as a concession to his scholastic position, still looked passably well after several weeks of schoolroom duty. She pressed him to wear a muffler about his neck, but he declined that also. He didn't need it, he said; but he was thinking of the incongruity of a muffler with no overcoat. It seemed more logical to assume that the weather was milder than it really was, on that sharp October evening, and appear at his best, albeit rather aware of the cold. Jennie was at home, and he was likely to see and be seen of her.

"You can borrow that tester," said the colonel, "and the cows that go with it, if you can use 'em. They ain't earning their keep here. But how does the milk tester fit into the curriculum of the school? A decoration?"

"We want to make a few tests of the cows in the neighborhood," answered Jim. "Just another of my fool notions."

"All right," said the colonel. "Take it along. Going to the speakin'?" "Certainly, he's going," said Jennie, entering. "This is my meeting, Jim."

"Surely, I'm going," assented Jim. "And I think I'll run along." "I wish we had room for you in the car," said the colonel. "But I'm going around by Bronson's to pick up the speaker, and I'll have a chuck-up load." "Not so much of a load as you think," said Jennie. "I'm going with Jim. The walk will do me good."

Any candidate warms to her voting population just before election; but Jennie had a special kindness for Jim. The fact that he was coming to be a center of disturbance in the district, and that she had quite failed to understand how his eccentric behavior could be harmonized with those principles of teaching which she had imbibed at the state normal school in itself lifted him nearer to equality with her. A public nuisance is really more respectable than a nonentity.

She gave Jim a thrill as she passed through the gate that he opened for her. White moonlight on her white furs suggested purity, exaltation, the essence of womanhood—things far finer in the woman of twenty-seven than the glamour thrown over him by the schoolgirl of sixteen.

Jim gave her no thrill; for he looked gaunt and angular in his skimpy, ready-made suit, too short in legs and sleeves, and too thin for the season. Yet, as they walked along, Jim grew upon her. He strode on with immense strides, made slow to accommodate her shorter steps, and embarrassing her by his entire absence of effort to keep step. For all that, he lifted his face to the stars, and he kept silence, save for certain fragments of his thoughts, in dropping which he assumed that she, like himself, was filled with the grandeur of the sparkling sky, its vast moon, plowing like an astronomical liner through the cloudlets of a wool-pack. He pointed out the great

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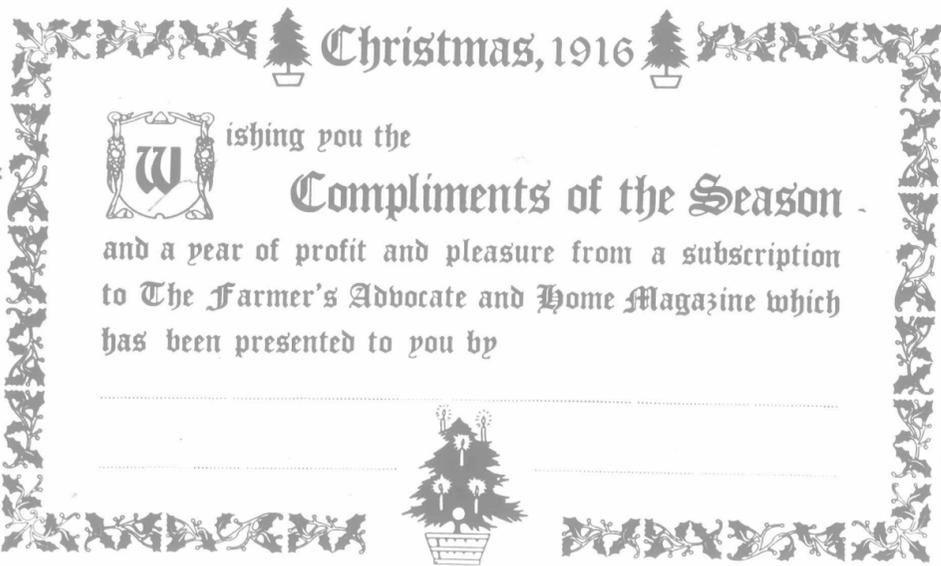
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open spaces in the Milky Way, wondering at their emptiness, and at the fact that no telescope can find stars in them.

They stopped and looked. Jim laid his hard hands on the shoulders of her white fur collarette.

"What's the use of political meetings," said Jim, "when you and I can stand here and think our way out, even beyond the limits of our Universe?"

"A wonderful journey," said she, not quite understanding his mood, but very respectful to it.

"And together," said Jim. "I'd like to go on a long, long journey with you to-night, Jennie, to make up for the years since we went anywhere together."

"And we shouldn't have come together to-night," said Jennie, getting back to earth, "if I hadn't exercised my leap-year privilege."

She slipped her arm in his, and they went on in a rather intimate way.

"I'm not to blame, Jennie," said he. "You know that at any time I'd have given anything—anything—"

"And even now," said Jennie, taking advantage of his depleted stock of words, "while we roam beyond the Milky Way, we aren't getting any votes for me for county superintendent."

Jim said nothing. He was quite, quite re-established on the earth.

Don't you want me to be elected, "Jim?"

Jim seemed to ponder this for some time—a period of taking the matter under advertisement which caused Jennie to drop his arm and busy herself with her skirts.

"Yes," said Jim, at last; of course I do.

Nothing more was said until they reached the schoolhouse door.

"Well," said Jennie rather indignantly, "I'm glad there are plenty of voters who are more enthusiastic about me than you seem to be!"

More interesting to a keen observer than the speeches, were the unusual things in the room itself. To be sure, there were on the blackboards exercises and outlines, of lessons in language, history, mathematics, geography and the like. But these were not the usual things taken from text-books. The problems in arithmetic were calculations as to the feeding value of various rations for live stock, records of laying hens and computation as to the excess of value in eggs produced over the cost of feed. Pinned to the wall were market reports on all sorts of farm products, and especially numerous were the statistics on the prices of cream and butter. There were files of farm papers piled about, and racks of agricultural bulletins. In one corner of the room was a typewriting machine, and in another a sewing machine. Parts of an old telephone were scattered about on the teacher's desk. A model of a piggery stood on a shelf, done in cardboard. Instead of the usual collection of text-books in the desk, there were hectograph copies of exercises, reading lessons, arithmetical tables and essays on various matters relating to agriculture all of which were accounted for by two, or three hand-made hectographs—a very fair sort of printing plant—lying on a table. The members of the school board were there, looking on these evidences of innovation with wonder and more or less disfavor. Things were disorderly. The text-books recently adopted by the board against some popular protest had evidently been pitched, neck and crop, out of the school by the man whom Bonner had termed a dub. It was a sort of contempt for the powers that be.

Colonel Woodruff was in the chair. After the speechifying was over, and the stereotyped, though rather illogical, appeals had been made for voters of the one party to cast the straight ticket, and for those of the other faction to scratch, the colonel rose to adjourn the meeting.

Newton Bronson, safely concealed behind taller people, called out, "Jim Irwin! Speech!"

There was a giggle, a slight sensation, and many voices joined in the call for the new schoolmaster.

Colonel Woodruff felt the unwisdom of ignoring the demand. Probably he relied upon Jim's discretion and expected a declination.

Jim arose, seedy and lank, and the voices ceased, save for another suppressed titter.

"I don't know," said Jim, "whether this call upon me is a joke or not. If it

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is, it isn't a practical one, for I can't talk. I don't care much about parties or politics. I don't know whether I'm a Democrat, a Republican or a Populist."

This caused a real sensation. The nerve of the fellow! Really, it must in justice be said, Jim was losing himself in a desire to tell his true feelings. He forgot all about Jennie and her candidacy—about everything except his real, true feelings. This proves that he was no politician.

"I don't see much in this country campaign that interests me," he went on—and Jennie Woodruff reddened, while her seasoned father covered his mouth with his hand to conceal a smile. "The politicians come out into the farming districts every campaign and get us hay-seeds for anything they want. They always have got us. They've got us again! They give us clodhoppers the glad hand, a cheap cigar, and a cheaper smile after election;—and that's all. I know it, you all know it, they know it. I don't blame them so very much. The trouble is we don't ask them to do anything better. I want a new kind of rural school; but I don't see any prospect, no matter how this election goes, for any change in them. We in the Woodruff District will have to work out our own salvation. Our political ring never'll do anything but the old things. They don't want to, and they haven't sense enough to do it if they did. That's all—and I don't suppose I should have said as much as I have!"

There was stark silence for a moment when he sat down, and then as many cheers for Jim as for the principal speaker of the evening, cheers mingled with titters and catcalls. Jim felt a good deal as he had done when he knocked down Mr. Dilly's chauffeur—rather degraded and humiliated, as if he had made an ass of himself. And as he walked out of the door, the future county superintendent passed by him in high displeasure, and walked home with some one else.

Jim found the weather much colder than it had been while coming. He really needed an Eskimo's fur suit.

(To be continued)

Gossip.

Arthur Marston, residing one-half mile north of Paris, Ont., will dispose of, by auction his entire herd of pure-bred Shorthorns, comprising 11 females and 2 bulls, on Monday, Nov. 27. Write to Mr. Marston and obtain particulars about the individuals that will be offered.

There is still time to procure a catalogue from J. C. Boeckh, Willowdale, Ont., describing his offering of about 20 head of pure-bred Holsteins which he will sell by public auction on December 5. There are three bulls in the herd, and the majority of the younger things are by well-known and highly-bred sires. Included in the lot are several winners at Toronto. See the advertisement and write for a catalogue.

R. O. P. Ayrshires.

In calling our readers' attention to the Ayrshires advertised elsewhere in these columns by Jno. Morrison, of Mt. Elgin, a word or two regarding the sires in use in the herd during the past few years may not be out of place. With the exception of the older foundation cows, mostly all of which were sired by "Whitney," an exceptionally good breeding bull got by White Prince of Menie, the majority of the younger cows are by the noted bull, "Great Scot," which was considered by many Ayrshire breeders to be one of the very best sons of the great bull, Scottie, which now has more R. O. P. daughters than any other bull of the breed in Canada. The dam of Great Scot, White Rose 2nd, was not only a prominent winner in the showing but also carried away a number of awards at several dairy tests; both at Guelph and Ottawa. The young bulls advertised are mostly of this same breeding, varying in ages from 10 to 16 months. All have officially tested dams whose yearly records all run around 10,000 lbs. on twice-a-day milkings. As Mr. Morrison is advertising these at sacrifice prices it will pay those in need of a young sire to get in touch with him at once either by letter or a personal visit to the farm, which is only a mile from Mt. Elgin Station, C. P. R., on the Ingersoll & Port Burwell line.

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Gossip.
Choicely Bred Shorthorns.
Shorthorn breeders all over Canada and in most of the States across the border are reporting an unusually strong trade in both bulls and females. The demand for good stuff at a couple of recent public auction sales in Western Ontario seemed almost greater than the supply, and no doubt there are a number of our readers who were present at both of these sales and are still without that new herd sire. In asking these breeders to let the advertising columns of "The Farmer's Advocate" assist them in locating the animals they require, we would call their attention to the advertisement of Wm. Ghent & Sons, of Freeman, Ontario. Their present offering includes not only some of the very best breeding obtainable, but also a number of excellent types of the breed in both bulls and females. There are sons and daughters of such noted sires as Right Sort (imp.), Bandsman (imp.), Newton Friar (imp.), as well as other noted bulls of Canadian breeding. The choice of the younger offering is perhaps the 8-months-old bull sired by Right Sort and out of a Butterfly-bred dam got by Bandsman (imp.). This is a thick, sappy, well-grown youngster, and would have looked well in company with many of the juniors seen out at the shows this past fall. There are several other bulls from 6 to 10 months old that should be going out soon. These are from such well-bred dams as Escana Champion, a 3-year-old Cranberry cow got by Right Sort; Stamford Lady, a 4-year-old Roan Lady cow; Orange Flower 2nd of Orange Blossom breeding and got by Village Duke; others by Royal Bruce, Viscount Violet, etc. Many of these breeding dams are still in the herd and are nearly all fresh, or freshening soon to Newton Friar (imp.), the present sire in use. Look up their advertisement in this issue. If there is anything you need in Shorthorns, let them know your wants either by letter or by a personal call. The farm is only 300 yards from Burlington Station, G. T. R.

The Orchard Leigh Herd.
A few years ago Orchard Leigh Farm, the property of Jas. G. Currie & Son, was known only to Oxford County residents as one of the neatest and best-kept, all-round farms situated on the Ingersoll-Woodstock Gravel. To-day, however, chiefly through their splendid herd of pure-bred Holsteins and their records for production at public dairy tests, as well as the official yearly and seven-day tests, the name "Orchard Leigh" stands out boldly among the most noted stock farms in the province. At present the herd numbers around sixty head, and seen recently by an Advocate representative was in by far a better average condition than the usual large herd seen after the bare pastures of the past summer. The young stock, and older breeding-cows as well, have come in to the stables in excellent fit, and the Association's monthly list should show some good work from the herd in the next few months. The highest record cow at present is the 34.98-lb. cow, Midnight Comet De Kol, she also has a 14-day record of 68.27 lbs. of butter, and running 10 months in the R. O. P. has 14,500 lbs. of milk, with an average test of nearly 4 per cent. Marion De Kol 2nd, another mature cow, made 29.20 lbs. in 7 days last year with twin calves; Midnight Gem De Kol, a ten-year-old cow, has 26.15 lbs. of butter in 7 days, and 19,359 lbs. of milk for the year. Highland Ladoga Ormsby had 25.81 lbs. of butter from 559.3 lbs. of milk at 3 years, and several other heifers, all under full age, run around 18 and 19 lbs. of butter in 7 days, in the two and three-year-old forms. Everything offered for sale at present are from these dams and by their own herd sires, King Veeman Ormsby and Sir Midnight Lyons Walker. The former, which is the senior sire in service, is by a son of the noted bull, Dutchland Sir Abbekerk, and out of the 25.81-lb. cow, Highland Ladoga Ormsby, mentioned above. Sir Midnight Lyons Walker, the junior sire, is a son of King Lyons Walker, and the 19,359-lb. cow, Midnight Gem De Kol. There are several young bulls of serviceable age from each of these sires, and each should go to some good herd. A number of females bred along these same lines make up the entire offering of Orchard Leigh at present. Write for further particulars and mention this paper.

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The chief characteristic of a sire is firmly implanted in all our bulls. Some of the best herds in America to-day are headed by bulls bred by us. We have them out of champions, by champions, and champions. Come to us to get a sire if you want to pick from the best in the country to-day. We have them from two-hundred dollars up.

A. F. & G. AULD
A. GORDON AULD, Owner

FIELD MARSHALL =100215= the calf of 1915, sold June 7, 1916, for \$3,775. Arkell Station, R. 2, Guelph, Ont.

Shorthorns, Shrops., Clydes. If you want a good young bull, a promising Stallion colt, a ram lamb or a young cow or heifer of beef type, having dams eligible or good enough for R.O.P. Come, see, and satisfy yourself and please the owner. Prices reasonable, that they may be sold. Visitors welcome.

Wm. D. Dyer, R. No. 3, Oshawa, Ont
Brooklin, G. T. R., and C. N. R., Myrtle, C.P.R.

WALNUT GROVE SHORTHORNS

Sired by the great sire, Trout Creek Wonder and out of Imp. cows and their daughters of Pure Scotch breeding, and others Scotch topped. For sale are several extra nice young bulls and a few heifers. Let us know your wants.

DUNCAN BROWN & SONS, R.M.D. SHEDDEN, ONT. P.M. & M.C.R.

NOVEMBER

SPAVINED MULE
Mr. C. B. Warner, cheap because one "Save-The-Horse" complete cure and has

is sold with Siemco on SPAVIN, Ring Ankle, Hoof or Te Our 66-page BOOK our expert veterinarian advice. Be sure to copy of Guarantee

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Spavin to remove the sound. Money to use and one cure. Works J Spavin. B. of a remedy f for a free copy

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Ten months' Particulars on

SCOTT DA

BLACK LEG

Write for book 10-dose pkg. B 50-dose pkg. B Use any injector. The superiority years of special ONLY. Insist order direct. The Cutter Labor

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An imported Scotch breeding Give full descr letter. Address

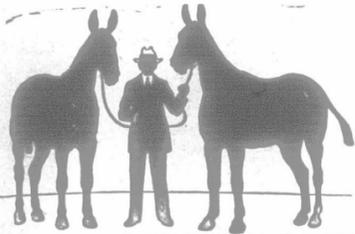
Farmer's Adv

Shorthorns and heifers of show foot. Also choice Y **ANDREW GROFF**

Northlynd R. O. Present offering: Or service, whose dam grandam in six y over 8,500 lbs. milk of 329 days. G. A.

Spruce Lo

Special offering of lambs, good type imported stock ram **W. A. DOUGLAS.**



SPAVINED MULE + SAVE-THO-HORSE = Profit \$300
Mr. C. B. Warner, Port Crane, N. Y., bought a team of mules cheap because one was lame. He located the trouble with "Save-The-Horse Book," treated as directed, made a complete cure and has since been offered twice what he paid.

SAVE-THO-HORSE
is sold with Signed Contract-Bond to return money if it falls on SPAVIN, Ringbone, Thorough or ANY Shoulder, Knee, Ankle, Hoof or Tendon Disease.

TROY CHEMICAL CO., 145 Van Horn St.
(Made in Canada) Toronto, Ont.
Druggists everywhere sell Save-The-Horse with CONTRACT or we send by Parcel Post or Express Paid.



Ring-Bone
There is no case so old or bad that we will not guarantee
Fleming's Spavin and Ringbone Paste
to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 45-minute applications cure. Works just as well on Sidebone and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of
Fleming's Vest Pocket Veterinary Adviser
Ninety-six pages of veterinary information, with special attention to the treatment of blemishes. Durable bound, indexed and illustrated. Make a right beginning by sending for this book.
FLEMING BROS., Chemists
75 Church St. Toronto, Ont.

Credit Cleaning-out Sale
PURE-BRED

Shorthorns

Mr. Arthur Marston, half-mile north of Paris, on

Monday, Nov. 27th

will offer by auction his entire herd, consisting of eleven females and two bulls. Choice animals of best strains.

Ten months' credit, 5 per cent. for cash. Particulars on application to proprietor or

SCOTT DAVIDSON, Auctioneer

BLACK LEG LOSSES SURELY PREVENTED
by CUTTER'S BLACKLEG PILLS
Low priced, fresh, reliable; preferred by western stockmen, because they protect where other vaccines fail.
Write for booklet and testimonials.
10-dose pkg. Blackleg Pills, \$1.00
50-dose pkg. Blackleg Pills, \$4.00
Use any injector, but Cutter's simplest and strongest. The superiority of Cutter products is due to over 15 years of specializing in VACCINES AND SERUMS ONLY. INSIST ON CUTTER'S. If unobtainable, order direct.
The Cutter Laboratory, Berkeley, Cal., or Chicago, Ill.

WANTED

An imported Shorthorn bull of good Scotch breeding. An aged bull preferred. Give full description with price in first letter. Address:—

Box D,
Farmer's Advocate, London, Ont.

Shorthorns and Swine. Have some choice young bulls for sale; also cows and heifers of show material, some with calves at foot. Also choice Yorkshire sows.
ANDREW GROFF R.R. NO 1, ELORA ONT.

Northlynd R. O. P. Shorthorns and Jerseys
Present offering: One Shorthorn bull old enough for service, whose dam, his dam's full sister and his grandam in six yearly tests made an average of over 8,500 lbs. milk, testing over 4% in an average of 329 days. G. A. Jackson, Downsview, Ont.

Spruce Lodge Stock Farm. Short-horns and Leicesters.
Special offering of a choice lot of ram and ewe lambs, good type and well woolled; also my imported stock ram.
W. A. DOUGLAS, CALEDONIA, ONT.

Gossip.

Pioneer Holsteins.

Of the one hundred or more pure-bred Holstein herds in Oxford County few have done more official testing or made higher records for yearly production than the noted Pioneer herd owned by Walburn Rivers & Sons, of Ingersoll. At the time of our visit, not long ago, Mr. Rivers had almost a score of his younger breeding females just finishing, several of which were daughters of Mr. Rivers' famous sire, Prince Aaggie Mechthilde, until recently the senior sire in service. Eleven daughters of this bull have freshened to date, all of which have been tested at Pioneer Farm, and the combined records of the first seven, starting at an average age of one year and nine months, average 14,800 lbs. of milk for the year. The four others now running have every promise at present of holding up equally well. Daisy Wayne Mechthilde from 1 year and 11 months still has another month to run, and at present has 10,927 lbs.; Calamity Snow Wayne, in the two-year form, has 14,765 lbs., and also has another month to run. Calamity Snow Pontiac has 16,827 lbs. in 11 months, and Daisy De Kol Mechthilde, the last and youngest daughter of Prince Aaggie Mechthilde, to freshen, has just completed from 1 year and 11 months of age with 12,003 lbs. for the year. It is doubtful if any other Canadian sire of the breed has eleven daughters at the age that will average so high. In selecting a junior sire to use on these exceptionally promising young daughters of Prince Aaggie Mechthilde Mr. Rivers has made no mistake in choosing the young sire Canary Hartog, whose three nearest dams averaged 30 lbs. of butter in 7 days, and which is himself a show individual in every respect. We understand that his maternal grandam, Royalton Canary De Kol Violet, an American cow, is just finishing a 10-year-old record that may stand above all previous yearly records for both milk and butter production. There are a number of young bulls in Mr. Rivers' present offering sired by this young sire from the daughters of Prince Aaggie Mechthilde, a combination of breeding that cannot fail to get production. Any of our readers in need of a new sire would do well to see these before buying elsewhere.

Questions and Answers.

- 1st—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.
- 2nd—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.
- 3rd—In veterinary questions, the symptoms especial must be fully and clearly stated, otherwise satisfactory replies cannot be given.
- 4th—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Miscellaneous.

Cow Fails to Milk—Cattle on Pasture.

1. Cow dropped second calf three weeks ago, but gives small quantity of milk. Milked well last year. What would you advise?
2. I let cattle out to pasture at so much for different ages. They were sold for beef and delivered September 2; he then claimed he could not furnish the pasture for the usual charge as they did not stay in longer. They were in about three months. Can he legally charge me more, as there was nothing said about time they were to remain? R.B.L.

Ans.—1. It is difficult to diagnose the case without seeing the cow or knowing more about her condition. It is possible that the cow is run down, or was not given sufficient rest between lactation periods. Either of these would cause a decrease in the flow of milk after freshening. Slight complications sometimes set in at the time of freshening, and it takes some time for the cow to regain her normal condition. Keep her in a comfortable stable and feed on milk-producing feeds, as clover or alfalfa hay, silage and roots, and such concentrates as oats, bran, gluten feed, or a little oil cake. If she does not respond to this treatment it is advisable to call in a veterinarian to examine her.

2. Evidently the man pasturing the cattle took it for granted that the stock would be on his place until the end of the season. However, if there was no written agreement regarding the time the cattle were to pasture, it is doubtful if he is in a position to charge higher than the rate agreed upon in the spring.

Sunshine and Shadow

Born? With the advent of each "little stranger" happiness increases, but so does responsibility. A child has been called "a bundle of big possibilities." But these will not be realized if poverty comes in as a consequence of the father's death. Every birth is an unanswerable argument for a Mutual Life Policy—each child is "an accredited agent" of the Mutual.

Married? Every man who assumes the responsibilities of marriage requires ample life insurance protection. The husband will maintain his home in the greatest comfort while he lives. Should the unexpected happen and should he be called away, who will keep that dearest spot on earth? Elbert Hubbard said: "Life insurance avoids the necessity of leaving things to the neighbors."

Died? Whenever we hear of the passing of any acquaintance who had helpless dependents, instantly the question arises: Was his family provided for? Is not this query another unanswerable argument for life insurance protection? Every birth, every marriage, every death, advertises the benefits of sound life insurance such as the Mutual issues.

The Mutual Life Assurance Company of Canada

Waterloo, Ontario

Escana Farm Shorthorns

FOR SALE: Two imported bulls, proven valuable sires; 12 bulls, 10 to 20 months old, all by imp. sires and from high-class dams; also for sale 20 heifers and young cows, several with calves at foot, all of very choicest breeding and especially suitable for foundation purposes.

Mail orders a specialty. Satisfaction guaranteed.
MITCHELL BROS., BURLINGTON P.O., ONT.
Jos. McCrudden, Manager. Farm 1/4 mile from Burlington Jct.

ROYAL BREEDING SCOTCH SHORTHORNS HIGH-CLASS TYPE

of high-class, fashionably-bred Scotch Shorthorns in calf to Sittyton Sultan's Dale, a Mina-bred son of Avondale, dam by Whitehall Sultan, is of interest; come and examine my offering.
A. J. HOWDEN, COLUMBUS, ONT. Myrtle, C.P.R., Brooklin, G.T.R.

SHORTHORNS AND SHROPSHIRE—T. L. Mercer, Markdale, Ont.

Have sold all the Shropshires I can spare this season. Present offering in Shorthorns—ten really choice young bulls, sired by Broadhooks, Golden Fame =50018= Imp. and out of such noted families as Campbell-bred Clarets, Nonpareils, Marr Missies, Stamfords, Crimson Flowers, Village Girls and Charming lems, ranging from 9 to 16 months old. All good reds and roans.

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

OAKLAND SHORTHORNS

51 to select from. 20 breeding cows and as many choice heifers, many of them bred, also a lot of choice young bulls, all of the dual-purpose strain. All sired by choice bulls and registered and offered at prices to live and let live.
JOHN ELDER & SONS, HENSALL, ONT.

Scotch Shorthorns, Yorkshires and Oxford Downs

Our Shorthorns are of the most noted Scotch families and the Scotch (imp.) bulls, Joy of Morning (imp.) =32070=, Benachie (imp.) =69954=, and Royal Bruce (imp.) =80283= have been used in succession. Two choice bulls of breeding age and heifers for sale. Also sheep and swine.
Erin Station, C.P.R. L.-D. Phone. GEO. D. FLETCHER, Erin, Ont., R.R. 1

IMPORTED SHORTHORNS

40 more imported Shorthorns have arrived home from quarantine. We now have 18 heifers in calf and 19 cows with calves at foot, also a few good imported bulls. They are all good individuals and represent the choicest breeding.
We can meet visitors at Burlington Jct. at any time if notified.
J. A. & H. M. PETTIT, FREEMAN ONT.

GLENGOW SHORTHORNS AND COTSWOLDS

Pure Scotch in breeding, we have an exceptionally choice lot of bulls for this season's trade, ranging in age from 8 to 15 months, big mellow fellows and bred in the purple. Also ram and ewe lambs of first quality.
WM. SMITH & SON, Columbus, Ont. Myrtle, C.P.R., Brooklin, G.T.R. Oshawa, C.N.R.

PLEASANT VALLEY SHORTHORNS

Special Offering:—Several young bulls from 7 to 16 months, sired by Loyal Scot (Imp.) and from our best breeding females. You will like these, and we could also spare a few choice females bred to the same sire.
GEO. AMOS & SONS, Moffat, Ont. (11 miles east of Guelph, C.P.R.)

Spruce Glen Shorthorns

When in want of Shorthorns visit our herd. We have 70 head to select from, Minas, Fames, Miss Ramsdens, Florences, etc. Many of them one and two-year-old heifers. Also several young bulls of breeding age—level, thick, mellow fellows and bred just right.
James McPherson & Sons, Dundalk, Ont.

BURNFOOT STOCK FARM

Breeders of high-record dual-purpose Shorthorns with a splendid conformation for beef. Visitors welcome.
S. A. MOORE, Prop. CALEDONIA, ONT.

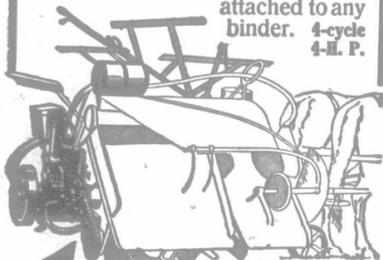
Shorthorns

Pure Scotch and Scotch topped—Booth. Also five (5) young bulls from ten to twenty months old, of the low down, thick kind, good colors—reds and roans. Prices reasonable.

G. E. MORDEN & SON, Oakville, Ont.

Save a Team During Harvest — Run Your Binder with 2 horses and a Cushman Engine

Better than 4 horses without the engine. Team simply draws machine. Engine does all operating. Sickle never stops when bull wheel skids. Easily attached to any binder. 4-cycle 4-H.P.



Weights Only 167 pounds

Quickly detached for any other farm power work. Delivers full 4 H.P. Speed changed while running. Has patented clutch pulley with sprocket for chain drive to double sprocket on binder. Schebler Carburetor. Also 2-cylinder 6-H.P. up to 20-H.P. heavy duty, light weight specialty farm engines. State size wanted.

CUSHMAN MOTOR WORKS OF CANADA, Ltd.
283 Princess St., Winnipeg, Canada

Farm Cushman The Original Binder Engine

The FAMOUS 4 h.-p. CUSHMAN ENGINE has just been mounted in combination with a flax-pulling machine at Forest, Ont., and it has proved a decided success. This has been the verdict on Cushman Engines wherever used as auxiliary power on binders, potato diggers, etc., etc.

NOW FOR INTERNATIONAL Greatest and Best THE LIVE STOCK SHOW

OF THE YEAR

December 2nd to 9th, 1916

At Union Stock Yards, CHICAGO

Daily Sales of Pure-bred Live Stock

CLYDESDALE SALE 50 HIGH-CLASS 50

Tuesday, Dec. 5th. 1.00 p.m. ANGUS

For particulars write J. A. H. Johnstone, Union Stock Yards, Chicago.

50 SELECTED 50 CHOICE 50

SHORTHORNS 50 HEREFORDS 50

Thursday, Dec. 7th. 1.00 p.m. For catalogue write F. W. Harding, Union Stock Yards, Chicago.

50 SHORTHORNS 50 HEREFORDS 50

Friday, Dec. 8th. 1.00 p.m. For catalogue write R. J. Kinzer, 1012 Baltimore Ave., Kansas City, Mo.

Sheep & Swine Sales Tuesday, Wednesday and Thursday

Many New Improvements, New Features, Thirty National Conventions, Daily Sales of all Breeds, etc., etc.

A Season of Learning, Entertainment, Brilliant Evening Shows and A TRIP TO CHICAGO.

LOWEST RATES ON ALL RAILROADS

Glenfoyle Shorthorns

Large selections in females, all ages, bred from the best dual-purpose families. One extra choice fifteen-months bull, some younger ones coming on. Priced well worth the money.

Stewart M. Graham, Lindsay, Ont.

Pure Bred Stock

CLYDESDALES, ABERDEEN-ANGUS CATTLE, HAMPSHIRE-DOWN SHEEP, BERKSHIRE HOGS

Our present offering is 4 shearling ewes, 7 ewe lambs, 7 ram lambs. These rams are in good condition. Address—James Smart, Beeton, Ontario

FOR SALE

The first prize and sweep stake stock horse, SCOTTISH BARON (4245) [11928], he is a son of Baron's Bride (3067) [9122]; also the 10-year-old stallion Baron Nicklas [16268], he being a grandson of Baron's Bride (3067) [9122]. For further particulars apply to—

D. W. SEYLERS, NEW HAMBURG, R. R. No. 3

SHORTHORNS

Males, females, one good red bull, 16 months, five younger, three fresh cows, calves by side, heifers. Right dual-purpose breed and kind.

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

PLASTER HILL SHORTHORNS

MILKING STRAINS—5 young bulls, 5 to 12 months, bred from record cows. Visitors welcome.

F. Martindale & Son, G.T.R. Caledonia, R.R.3

Questions and Answers. Miscellaneous.

Sheep Protection.

1. Where can I get the latest copy of the Act regarding sheep worried by dogs?
2. If a registered sheep is killed by dogs, are you entitled to only the mutton value or their value as breeding stock?

SUBSCRIBER.

Ans.—1. Write W. B. Roadhouse, Deputy Minister of Agriculture, Parliament Buildings, Toronto.

2. According to the new Act the owner of the sheep is entitled to full value.

Pneumatic Water System.

Would you kindly advise where I may get information, also who handles the pneumatic air system referred to in your paper of Oct. 19, 1916, under the heading, Automobiles, Farm Machinery and Farm Motors, sub-heading, Some Facts About Water Supply?

WM. L.

Ans.—Empire Manufacturing Co., London; National Equipment Co., 33 Wabash Ave., Toronto, and London Engine Supply Co., London, are firms manufacturing the pneumatic water systems. These firms have literature describing in detail the working of the systems they make and sell.

Bull on Pasture—Windpuffs.

1. A and B own farms adjoining. A keeps grade cows with a grade bull running with them. B keeps the registered Shorthorn cattle. A's grade bull got through a part of the fence and served one of B's pure-bred cows. What are the laws regarding scrub bulls? Can B collect damages? How much would be reasonable? If he can, when would be the right time to do it?

2. I have a valuable young mare coming four years old. I worked her a little last winter in order to get her going good for the spring. We drew out some manure on the sleighs coming on spring with her. About a week after, when backing her out of the stall in the mornings for water, she was very stiff in her right hind leg, seemed to be up in the hip; the leg never swells. This stiffness occurs sometimes for one or two mornings and maybe then not for a week. We had not noticed it for nearly two months until lately; it has occurred about once every week when backing out of the stall. She seems to drag the leg back, cannot pick it up off the floor. When out on grass she seems all right. The first dozen steps ahead after backing she draws the leg up, which seems to catch and kind of crack. She also walks very wide for a short time. She is in good condition, has worked on grader since harvest. Could you tell me what is wrong and what to do?

3. What causes windpuff on horse's hind leg? What will take them away?

J. M.

Ans.—1. According to law, bulls are not supposed to run loose in the field, and if any damages occur the owner is liable. B can legally claim damages; the amount depending on the extent thereof, which would be the difference between the price of the grade and pure-bred calf. Such damages could be collected when definite proof can be furnished that the cows are in-calf.

2. The symptoms partially indicate sprain, or it may be partial dislocation of the patella. If the latter, keep the mare in a box stall when in the stable, and the bone will not be nearly so liable to become disarticulated. Clip the hair off the front and inside of the stifle and apply a blister made of 2 drams each of biniodide of mercury and cantharides, mixed with 2 ounces of vaseline. Rub well with the blister once daily for two days, and on the third day apply sweet oil. When the blister is on, tie the mare's head so she cannot bite it. The same blister is used for sprain.

3. Windpuffs are caused by hard work, concussion, and sprains. Bathe the puffs with ice-cold water for half an hour every morning, rub dry after bathing and apply an iodine liniment, consisting of one dram of iodine crystals to sixteen ounces of water.



ANY farmer who is using an Alpha will tell you that this engine is a great help to him and that he can absolutely rely on it. The Alpha is a steady, powerful engine that will do a great number of big and little jobs on your farm that now cost you too much in time and labor. You can make your work easier, get it done quicker and save money by using an Alpha.

The Alpha is a smooth running, powerful engine that has proved its value to thousands of farmers in all parts of Canada. It is a reliable engine. You can always depend upon its being in good working order when you want to use it. There are no complicated parts to get out of order and cause time-wasting delays and expensive repairs. Ask Alpha Engine users. What they tell you will be proof of Alpha superiority.

The Alpha starts and runs on a simple magneto. You get a hot, fat spark at all times. You are never troubled with weak batteries. You can use kerosene or gasoline for fuel. The fuel consumption and speed of the engine are accurately controlled by a reliable, sensitive governor. This governor acts the instant there is the slightest variation in the load. Therefore, the engine runs steadily at all times and there is no waste of fuel. The Alpha is not affected by cold weather.

There are many other reasons why Alpha Engine users get the greatest engine value for their money. Every feature of the Alpha is completely illustrated and described in our large engine catalogue. Ask for a copy and read it carefully.

Alpha engines are made in eleven sizes—2 to 28 H.P. —each furnished in stationary, semi-portable or portable style with hopper or tank cooled cylinder.

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LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA. Sole Distributors in Canada of the famous De Laval Cream Separators. Manufacturers of Ideal Green Feed Silos. Catalogues of any of our lines mailed upon request.

MONTREAL PETERBORO WINNIPEG VANCOUVER

Shorthorn Bulls---Shorthorn Females

A HERD THAT YOU WILL LIKE

You will like our females; you will like the breeding and you will like the sires that have been used on these in the past year. Right Sort (Imp.), Bandsman (Imp.), Newton Friar (Imp.), Lytton Selection, Escana Champion,—all these bulls have been used in the past year. We can show you some young bulls by these sires that are show calves. Come and see them or let us send you particulars. We can also spare some females bred to them; heifers, four and six year-old cows, as well as cows with calves at foot.

WM. GHENT & SONS, FREEMAN P.O., ONT. Farm, 300 yds. from Burlington Jct., G.T.R.

Robert Miller Still Pays the Freight—And he is offering in Shorthorns some of the best some younger still; heifers ready to breed and younger, and some in calf. They are of the best right, just what you want to make a proper foundation for a good herd, and suitable to improve any herd in the land. They will be priced so that you can afford to buy, if you will tell me what you want. Our business has been established 79 years, and still it grows. There is a reason.

ROBERT MILLER, Stouffville, Ont

WILLOWBANK STOCK FARM SHORTHORN HERD

Established 1855. This large and old established herd has at the head the two great bulls: Imported Roan Chief =60865=, a butterfly, and the prizewinning bull, Browndale =80112=, a Mina. An extra good lot of young stock to offer of either sex. Splendid condition. Good families of both milking strain and beef.

JAMES DOUGLAS, CALEDONIA, ONT.

Choice Breeding SCOTCH SHORTHORNS High Quality

We are offering this fall the choicest lot of young herd headers we ever bred, several are of serviceable age, high in quality, rich in breeding. Also a number of heifers.

GEO. GIER & SON, WALDEMAR, R.M.D. Grand Valley Sta.

IRVINEDALE SCOTCH SHORTHORNS

Our offering this year in Scotch Shorthorns is probably the best we have offered for many years, there are several young bulls of serviceable age, right good ones and breeding the very best; also females of any age.

JOHN WATT & SON, ELORA, R.M.D.

MEADOW LAWN SHORTHORNS

We are offering a splendid lot of young bulls from 10 to 18 months old, of the low-set, thick, fleshy type from good milking dams. You are invited to inspect this offering.

Elora, R.R. No. 1, F. W. EWING

SPECIAL OFFERING FROM THE SAIEM SHORTHORN HERD

Eight roan and red heifers about twelve months, big, well bred heifers of fine quality, also ten young bulls of our usual high-class kind.

J. A. WATT, ELORA, ONTARIO

PIONEER FARM HOLSTEIN HERD

Of long-distance record makers, the kind that milk heavy and test around 4 per cent. the whole year. Of the six highest butter-fat-record two-year-olds in Canadian R.O.P., one half were bred at Pioneer Farm. Young bulls for sale from dams of the same breeding as these and sired by Canary Hartog, whose three nearest dams average 30 lbs. butter in 7 days and 108 lbs. milk in one day.

WALBURN RIVERS, R. R. No. 5, INGERSOLL, ONT. Phone 343 L, Ingersoll Independent

WINDSOR DAIRY SALT.

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Our mar are payi from 42 t Net to S A line w Toronto 9-11 Ch

Where a And wh your cre We want and mor for us. Write for Silver LON

CREA Ship your We pay all We supply c We remit we We guarantee

Ontario 1 YEA Bull calves Could spar bred to t SEGIS PO R. M. HO Bulls, B just ready for King Segis Pont bull, Pontiac H testing dams. and get them. C. P. R. station R. W. Walker

FOR SALE— January 5th, white. Dam's months, testing at three years or for particulars R. R. 5, St. M



The Salt is mighty important
Windsor Dairy Salt
 THE CANADIAN SALT CO. LIMITED

Better Be Sure Than Sorry
 Your profits depend upon the health of your flock.

Pratt's POULTRY REGULATOR
 Regulates the blood, bowels and digestive organs. Keeps fowls active and makes them lay more eggs. Prevents disease.



Write for FREE Book, "Poultry Wrinkles."
PRATT FOOD CO.
 of Canada, Limited
 68 J. Claremont St.
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CREAM Wanted

Our markets have advanced. We are paying according to quality from 42 to 46c. per lb. fat. Net to Shippers. Cans supplied. A line will bring you particulars.
Toronto Creamery Co., Ltd.
 9-11 Church Street, Toronto

CREAM

Where are you shipping now? And what are you getting for your cream?
 We want more individual shippers and more men to gather cream for us.
 Write for our proposition.
Silverwoods Limited
 LONDON, ONTARIO

CREAM WANTED

Ship your cream to us. We pay all express charges. We supply cans. We remit weekly. We guarantee highest market price.
Ontario Creameries, Limited
 London - Ontario

1 YEARLING BULL

Bull calves from 10 months down. Could spare 10 cows or heifers, bred to the great bull, KING SEGIS PONTIAC DUPLICATE.
R. M. HOLTBY, Port Perry, Ont.
Bulls, Bulls We have several young Holstein bulls for sale, just ready for service. Sired by the great bull, King Segis Pontiac Duplicate, and our junior herd bull, Pontiac Hengerveld Pietertje, and from high-testing dams. Prices low for the quality. Write and get them. Manchester, G. T. R., and Myrtle, C. P. R. stations. Bell Phone.
R. W. Walker & Sons, R.R. 4, Port Perry, Ont.

FOR SALE—Choice Holstein bull calf, born January 5th, 1916, nicely marked, about half white. Dam's R.O.P. record 15,000 lbs. in ten months, testing 3.8% fat. Sire's full sister R.O.P. at three years old, over 19,000 lbs. milk. Write for particulars or come and see. **R. S. OLIVER,** R. R. 5, St. Mary's, Ont.

Questions and Answers. Miscellaneous.

Windgall.

1. Could you give me the names and addresses of firms making ammunition in Toronto?
 2. I have a horse that sprained his ankle last fall, and a swelling something like a windgall has appeared. What liniment would you advise to remove the swelling?
 O. C.

Ans.—1. Write the Department of Militia and Defence, Ottawa, or the City Clerk, Toronto.
 2. Bathe with cold water and salt for half an hour every evening, and bandage for a couple of hours. Apply an iodine liniment, consisting of one dram of iodine crystals to sixteen ounces of water.

Bees in a Wall.

I bought a brick house and find that bees are in the walls. They are working in several places in the walls and beside the window. They say they have been there three years and have swarmed twice. Would be pleased if you could tell me how to get rid of them.
 I. S.

Ans.—It is a difficult problem getting bees out of a wall. One method which proves satisfactory is to fasten a bee excluder over the opening where the bees gain entrance to the wall. Build a small platform just beneath it and set a beehive on it. The bees coming out are unable to return to their former home, owing to the bee excluder, and are induced to enter the hive. This is the only practical means of ridding the walls of the bees. When the bees are all out close all openings.

Salivation.

I have a cow that slobbers quite badly. I have noticed her for some time but thought it was something in the grass, but now she is tied in and is no better. She is well fed and appears to be all right, milks well and has no cough. I think it's when she lies down that she slobbers the most. Do you think it is contagious or what is the cause, and what can be done for her?
 A. W.

Ans.—Sometimes salivation is merely a habit. In other cases it is due to some trouble in the mouth or to some irritant in the feed. Have her mouth examined and if nothing is wrong with teeth, cheek nor tongue and the feed is good, it may be a habit with the cow. Apparently the salivation does not affect her in any way, consequently there is no cause for alarm. It is not contagious.

A Good Ration for Dairy Cattle.

What would be a balanced ration with the least expensive feeds? We have a supply of clover and alfalfa hay and corn silage. We have been feeding bran, gluten and cotton seed, and have gluten on hand. Oats are 2 cents a pound, bran \$30 per ton, gluten \$27 per ton, oil cake \$41 per ton, cornmeal \$35 per ton, middlings \$32 per ton, cotton seed \$37 per ton.
 Ans.—It is not stated what class of stock is to be fed. What is a balanced and satisfactory ration for fattening steers would not prove so good for milk cows. Clover or alfalfa hay and silage are ideal roughages for all classes of stock. Cows giving a small quantity of milk can be economically fed on these roughages without the addition of any concentrates. Ten pounds of alfalfa or clover hay and thirty pounds of silage would be a very good ration with a nutritive ratio of about 1:6. However, this would hardly give sufficient dry matter, and the hay could be increased a little or else oat straw fed. You do not state whether you are feeding gluten feed or gluten meal, but three pounds per day of the feed added to that already mentioned would supply the average milking cow. It is generally considered advisable to allow the cows all the roughage they will eat, and then feed about one pound of concentrates to four pounds of milk produced. Bran and oats are two valuable feeds and are safe to feed. However, in compiling a ration the price of such feeds must be considered. For feeding steers, cornmeal might profitably be included, and less of the gluten feed used. In November 16 issue of "The Farmer's Advocate" a table is published giving the digestible nutrients in a number of feeds commonly used in feeding stock. Full explanation is given for working out a balanced ration.

The Elgin Pure-bred Breeders' Association will sell

55 Head of High-Class Holstein Cattle

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FIFTY FEMALES —: FIVE BULLS
 Representatives of some of the best strains in Canada, viz:
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AUCTIONEERS:—Locke & McLachin, T. Merritt Moore, Lindsay & Pound
 Send for your catalogue and plan to come to the sale. For catalogue write:
FRED CARR, Manager, NEIL BURTON, Secretary,
 Box 115, St. Thomas, Ont. R. R. 2, Port Stanley, Ont.

UNRESERVED PUBLIC SALE OF Pure Bred Holstein-Friesian Cattle

Also Stock and Implements
 will be held at the farm of J. C. Boeckh, Willowdale, on
Tuesday, December 5th, 1916
 Sale will commence at 12 o'clock noon.

Herd consists of nearly TWENTY HEAD, including a number of young cows, several choice young heifers, one 18 months' bull, and two bull calves. The majority of the younger things are by the well known and highly bred sire Sir Lyons Hengerveld Segis, and others are by Grace Fayne 2nds Sir Colantha and Prince Abbecker Mercena. Included in the lot are a number of prominent winners at Toronto. Write for catalogue at once.

J. C. Boeckh, Prop. Toronto & York Willowdale, Ont.
 Radial Cars
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Choicest Holstein Friesians

"We Breed for Type and Production"
 Lakeview Dutchland Hengerveld 2nd heads our herd. He was grand champion at the Canadian National Exhibition and Western Fair, 1916. His 3/4 sister is Canadian Champion 3-year-old, 34.66 lbs. butter in 7 days. He shows great transmitting powers, being the sire of winners at London and Toronto. Our present offering consists of young bulls out of high-testing R. O. M. dams. Prices within reach of all. Write for extended pedigrees and prices.
W. G. BAILEY, R. R. No. 4, Paris, Ont. Oak Park Stock Farm.

King Segis Pontiac Paul 15940

WE have for sale a few sons of the above bull, ready for service, and whose dams are large, heavy-producing cows. Here is an opportunity to get the blood of KING SEGIS and KING OF THE PONTIACS at reasonable prices. Correspondence solicited.
 Also Berkshire and Yorkshire Swine
Larkin Farms Queenston, Ontario

35 LB. BULL FROM THE HET LOO HERD

(His dam and sire's dam average 35.55 lbs. of butter in 7 days)
 3 months old and a show individual. Sire, Avondale Pontiac Echo, a son of the famous May Echo Sylvia, World's champion milk cow; Canada's first 40 lb. cow. Dam, Roxie Concordia, 30.02 lbs. butter; 676.5 lbs. of milk in 7 days.
 We also have a 17 months' bull by King Pontiac Artia, Canada, and out of a 25 lb. sister of the great May Echo. Another, same age by Dutchland Colantha Sir Mona, and from the noted 25 lb. show cow, Cherry Vale Winner. Come and see these, you will like them.
W. L. Shaw, Newmarket, Ont. Stops 69 Young St., Toronto and York Radial Cars.
Gordon H. Manhard, Sup.

HOLSTEIN CATTLE

Our present offering is a bull born February 1916. Dam gave 106 lbs. milk a day, sire's dam 116 lbs. a day. Nicely marked and a show bull. We make a specialty in foundation stock.
D. C. FLATT & SON, R. R. No. 2, Hamilton, Ontario

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Think this over—we have 175 head of Holsteins, 50 cows milking, 25 heifers due to calve in the fall and 60 heifers from calves up to 2 years, as well as a dozen yearling bulls, and anything you may select is for sale. Breeding and individuality the very best. **S. G. & Erie Kitchen, St. George, Ont.**

HOSPITAL FOR INSANE, Hamilton, Ont.

Holstein bulls only for sale, four fit for service, one being a son of Lakeview Dutchland Lestrangle, and the others from one of the best grandsons of Pontiac Korndyke, and large producing, high-testing R. of P. cows. **APPLY TO SUPERINTENDENT.**

CLOVER BAR HOLSTEINS

We are offering at the present time, a few young bulls, two of which are fit for service, from high-testing dams and sired by Francy 3rd Hartog 2nd, whose two nearest dams averaged 32 lbs. butter in 7 days and 103 lbs. milk per day. Prices reasonable. **PETER SMITH, R.R. No. 3, STRATFORD, ONT.**

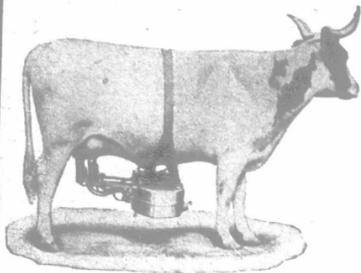
ORCHARD LEIGH HOLSTEINS

Offers several young bulls from 7 to 13 months old, all from officially tested dams with records up as high as 29.20 lbs. of butter in 7 days. These are a good lot, sired by our own herd bulls, King Veeman Ormsby and Sir Midnight Lyons Walker. Could also spare a few females.
JAS. G. CURRIE & SON, (electric car stops at the gate) Ingersoll, Ontario

Only One Son of King Segis Walker

left. Born April 14th, 1916. Dam, sister to Rag Apple Korndyke 8th, the \$25,000 bull. Individuality as good as his pedigree. Photo and pedigree on application.
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JERSEY BULLS. For sale—Knoolwood's Raleigh, sire Fairy Glen's Raleigh (imp.), 22 daughters R. O. P.; dam Eminent Honey Moon (imp.) R.O.P. 596 lbs. butter; reserve champion on island. Capt. Raleigh ready for service, sire Knoolwood's Raleigh, dam Mabel's Post Snowdrop; first as calf, 1914, first Junior Champion, 1915, 2nd 1916, Toronto. Miled 38 lbs. day, 6 per cent. milk, first calf. **Ira Nichols,** Burgessville, Ont. R.R. No. 2.

Questions and Answers. Miscellaneous.

Size of Silo.

1. Is a silo a profitable thing on a good grain-growing farm where there are milk cows?

2. What size would a silo need to be to hold enough feed for 12 head of milk cows for seven months' feeding?

3. How many acres of corn would it take for same?

4. How much lumber would it take and what size and length? D. H.

Ans.—1. Few stockmen who have silos would care to be without them, and the fact that many are building the second one is evidence that they are a satisfactory method of conserving feed. Silos are particularly valuable to dairy-men.

2. A silo 12 by 35 feet will hold ample feed for a herd of the size mentioned.

3. The acreage will depend entirely on the crop. It will take about 8 acres of a 10-ton-to-the-acre crop.

4. It will require about 1,300 feet of lumber. It is advisable to use 2-inch tongued and grooved plank. These would have to be bevelled in order that they fit in a circle. Sometimes two 18-foot lengths are used, or three 12-foot lengths. This gives a silo 36 feet high.

Ophthalmia—Leucorrhœa.

1. My horses have some eye trouble. At first the eyes seem weak and they keep them partly shut. Sometimes they run water and a scum comes over them. One horse went blind; another has a scum on the eye-ball and another one keeps its eyes partly shut.

2. A valuable cow has had leucorrhœa for some time and is very thin. She is on pasture and eats well, but is hide-bound. Kindly prescribe remedy.

SUBSCRIBER.

Ans.—1. Symptoms are those of periodic ophthalmia, a constitutional disease which appears periodically without apparent cause, and a few attacks frequently result in blindness. Administer a laxative as 1½ pints of raw linseed oil. Keep in a comfortable stall excluded from drafts and direct sunlight. If possible partially darken the stall. Make a lotion of 10 grains sulphate of zinc, 20 drops fluid extract belladonna, and 2 ounces distilled water. Bathe the eyes three times daily with hot water, and after bathing put a few drops of the lotion into each eye. Recovery is slow, patience and continued treatment are necessary.

2. Leucorrhœa is a chronic disease of the womb difficult to treat, and it is generally advisable to get a veterinarian. However, if you decide to treat it yourself flush the womb out with a two-per-cent. solution of Zenoleum or phenyl heated to about 100 degrees F., and inject about two gallons into the organ with an injection pump. Feed well and give a tonic of one dram each of sulphate of iron, gentian and nuxvomica three times daily. It may take some time to effect a cure.

Veterinary.

Chorea.

Pup four months old has some nerve disease which causes him pain and uneasiness. When lying the muscles of one front leg twitch all the time, and when he rises he will not use the leg for a while. C. L. H.

Ans.—This is a form of chorea, probably a sequel to distemper. Give him a laxative of a tablespoonful of syrup of buckthorn, and repeat the dose when necessary; also give him 2 grains of bromide of potassium three times daily. Cases of this nature are very hard to treat successfully. V.

Sore Feet.

Cow seems to suffer in her legs. She changes the position of her feet frequently, and her back is becoming arched, as she keeps her hind feet forward under her body. N. L. K.

Ans.—The symptoms indicate foul in the feet. Keep her well bedded and in a perfectly dry stall. Clean out well between the clouts and apply poultices of hot linseed meal. Change poultices twice daily and keep warm by adding hot water as required. When the acute soreness is allayed cease poulticing and if there be any raw surfaces dress three times daily until healed with 1 part carbolic acid to 30 parts sweet oil. V.

Look For the "SV"

THE highest of all compliments is being paid to Vessot grinding plates—imitations are now being offered for sale. We appreciate the compliment, however, more than our customers will appreciate the imitation plates. Therefore, to protect our customers as well as ourselves, we have arranged to mark every genuine Vessot grinding plate with the raised letters, "SV" showing plainly in the face of the plate, near the center. It will, therefore, be easy for you, hereafter, to identify any plate offered to you for use in your Vessot feed grinder. Look for the "SV." If it's there, you are buying a plate guaranteed as fully as your grinder was guaranteed when you bought it. We cannot stand behind the performance of Vessot grinders unless genuine Vessot plates are used.

Another point—even the genuine Vessot plate will do better work and give better service when driven by the steady power of a Mogul engine. If it should happen that you are not fully informed on the advantages of the Vessot feed grinder, with its two sieve spout and grinding plates so good they are imitated, and with the kerosene-burning feature of the Mogul engine, see the McCormick local agent, or write to us at the nearest branch house. It will pay you.

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James Benning, Williamstown, Ont.

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SHROPSHIRE

We have something particularly good in Ram and Ewe lambs this year; and a choice lot of young Shorthorns, bulls and heifers. Peter Christie & Son, Manchester P.O., Port Perry, Ont.

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In Shropshires, have only ewe lambs now to offer. In Shorthorns one good 3-year-old Missie bull, bull calves and heifers of popular families.

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Please mention "The Advocate."

Questions and Answers.
Miscellaneous.

Alfalfa Seed.

1. Where can I get the best alfalfa seed?

2. Which is the best kind? I shall want five bushels.

Ans.—1 and 2. The Ontario Variegated and Grimm's Alfalfa are the two varieties which have given the most satisfactory results in Ontario. Communicate with some of the seedsmen who advertise in these columns, or else with some of the growers of the Caledonia district who also advertise their seed.

Garget.

We have a cow that is troubled with inflammation in her udder. This inflammation seems only to affect one-quarter of her udder at a time. The udder swells up and becomes quite hard and tender, but after rubbing well it softens, and, when milked, big clots of milk come out sometimes clogging the teat, so that they have to be pulled out. This trouble has occurred in each quarter. When she is kept in it is not so bad, but when let out again on the wet grass it comes back the same as before. We never have had any trouble of this kind before and would like your advice.

A. M. S.

Ans.—The symptoms indicate that the cow is troubled with garget, which is an inflammation of the udder and is brought on by injury, or cold, or the introduction of germs. We are inclined to believe that this case is caused by the cold, and the udder has evidently become susceptible to the trouble. As soon as inflammation is noticed it is good practice to give a purgative of one pound Epsom salts and a teaspoonful of saltpetre, dissolved in a quart of hot water. The saltpetre may be continued for a few days in the feed. The affected parts should be bathed three times a day with hot water, rubbed dry, and then a mixture of spirits of turpentine and goose oil or lard rubbed well in. Milk out the affected quarters at each bathing. Very often the use of a quarter or more of the udder is lost through this trouble. Possibly the udder will come all right when the cow is stabled, but if the trouble recurs frequently it would be advisable to beef the cow.

Improving Sandy Soil.

1. What is my best method to get humus in a sandy soil? I have a field of about six acres which grows practically nothing, this year it was neither worth grazing nor cutting. I have it plowed this fall and have been thinking of sowing vetch and buckwheat the end of May and turning it under as green manure for the following spring. Is there anything that I could sow and get a fair crop in the same year and yet improve the land?

2. What is the best fertilizer for potatoes on sandy soil, and what quantity should be applied per acre?

Ans.—1. Sandy soils have been built up by the use of clover or some other legume. It is doubtful if there is anything better. A legume adds nitrogen to the soil, and if plowed under increases the humus content. Vetch serves the same purpose. Buckwheat is also a good crop to turn under to increase the humus, but it does not add nitrogen to the soil like clover. We have known soils to be so poor that clover would not catch. In such cases rye is first sown and plowed under, and the next year little difficulty is experienced in getting a catch of clover. We do not know of any crop which you could grow and harvest and at the same time improve the soil, unless it is some legume. In the end you would be farther ahead to get humus into the soil by plowing under the first crop, thus preparing the soil for the second year.

2. Potatoes draw heavily on the potash content of the soil, and considerable quantity of it is frequently used on this crop. Acid phosphate and nitrate of soda are also frequently applied. A mixture of about 600 pounds of these substances is recommended in the proportion of about 2.4 per cent. nitrate of soda, 7.4 per cent. acid phosphate, and 10 per cent. sulphate of potash. Barnyard manure applied on a clover sod and plowed under makes ideal conditions for potato growing.

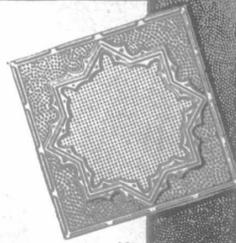
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A number of splendid ram lambs, fit for service this fall. Sired by one of the best imported rams that we ever owned, and from imported dams. Prices and description on application.
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Questions and Answers. Miscellaneous.

Material for Silo.

1. Is it advisable to paint a board silo on the outside?
2. Should a wooden silo be built of tongue-and-grooved material?

A. J. S.

Ans.—1. Paint tends to keep the lumber from cracking, and so prolongs the life of the silo.

2. In order to keep silage in good condition it is necessary to exclude the air from it, consequently tongue-and-grooved material is preferable.

Worms in Horse.

My horse is not very active. I feed him regularly but he keeps in poor condition. Some people tell me he has worms. What do you think is wrong with him, and what treatment would you advise?

W. D.

Ans.—It is probable he has worms. Take 4 drams each of sulphate of iron, sulphate of copper, tartar emetic and calomel, mix and make into 12 powders. Give him a powder every night and morning. After the last has been taken give him a purgative of half a pint raw linseed oil. Feed bran only for 24 hours after giving the purgative.

Buckwheat for Feed—Tuberculosis in Fowl.

1. I have considerable good buckwheat and plenty of clover hay, but very few oats on hand. I would like to know if I can winter horses successfully on buckwheat, or what should be added to make a balanced ration? The horses will only be worked enough to give them exercise.

2. Would mares that are in foal be injured by feeding them buckwheat?

3. Would it be all right to feed milk cows and calves buckwheat in conjunction with corn silage and clover hay?

4. What is the matter with my hens? They go lame, mope about and get light in weight, finally they die. Some of my neighbors say it is tuberculosis and that I will have to destroy my hen-house and plow up my barnyard. Is this true?

5. If I move my hens to a new hen-house will I have to treat them in some way to get rid of mites, or do the mites all stay in the old hen-house in day-time?

C. L. S.

Ans.—1. A little buckwheat can be fed to horses, especially when they are working, but care must be exercised as it is known to be injurious. A small quantity could be mixed with a few oats or a little bran. When horses are not working they can be kept in fairly good condition on good clover hay. It is not necessary to feed them all they will eat, as many horses are believed to be injured by being overfed on hay. What they will clean up in an hour and a half is usually considered to be sufficient.

2. We would not care to feed mares that are in foal on buckwheat.

3. A small quantity can be fed to the cows. The buckwheat by-products have the reputation of producing a large flow of milk.

4. The symptoms indicate that the birds are suffering from tuberculosis. This is a disease which is rather difficult to eradicate and requires a general clean-up. All birds showing symptoms of the disease should be destroyed and their bodies buried deeply or else burned. The hen-house should be thoroughly cleaned; all movable objects should be taken out, and the inside thoroughly sprayed with a solution of corrosive sublimate, carbolic acid or Zenoleum, and whitewashed. The nests, roosts, feeding troughs, etc., should be treated likewise, and the ground disinfected with slaked lime. The run-ways or yards should be broken up and treated with lime. It would be just as well if the birds did not run on the same ground for a while, but it is possible to treat the ground to destroy the disease germs. If any of the birds are saved, they should be kept by themselves to see if they develop the disease. Putting them with a new flock may cause trouble. It might be advisable to get rid of the entire flock and start with new birds.

5. The mites usually leave the birds and hide in crevices about the pen during the day. However, it is advisable to dust the birds with some louse killer before putting them in new quarters. Applying kerosene to the roosts will materially aid in destroying the mites.

An Open Letter

Sydney, Nova Scotia, Nov. 23, 1916.

To the Farmers and Stockmen attending the Ontario Provincial Fair at Guelph.

Gentlemen:—

Believing you would appreciate the opportunity of talking with brother farmers and stockmen throughout Ontario who have used SYDNEY BASIC SLAG, we have arranged for our representative, Mr. A. L. Smith, to be at the Fair, and he will be pleased to put you in touch with such men. It will be well worth your while to hear what they have to say of this wonderful fertilizer.

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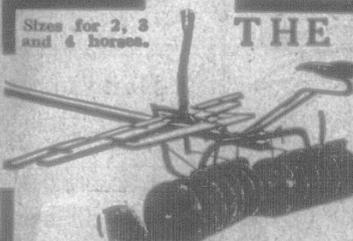
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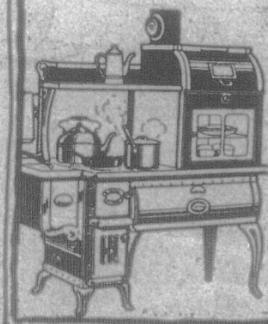
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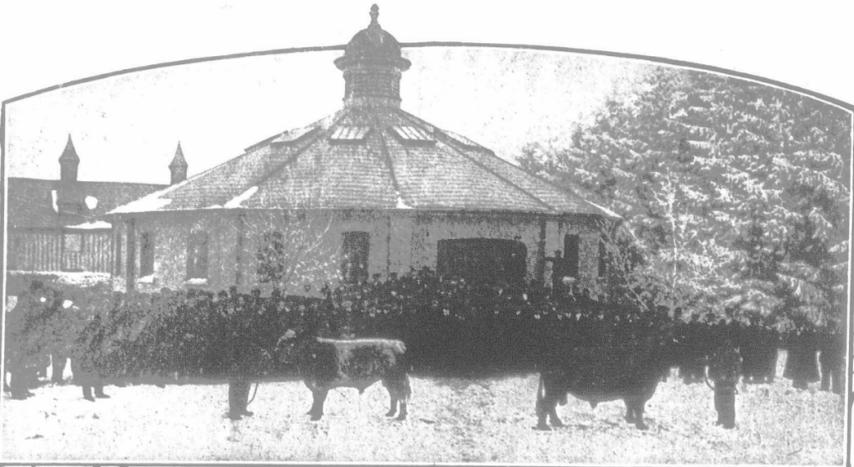
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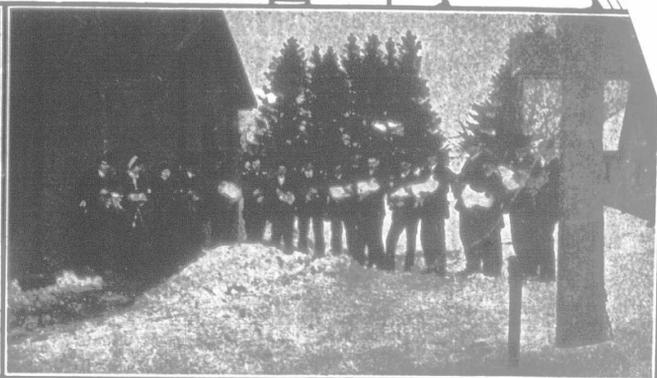
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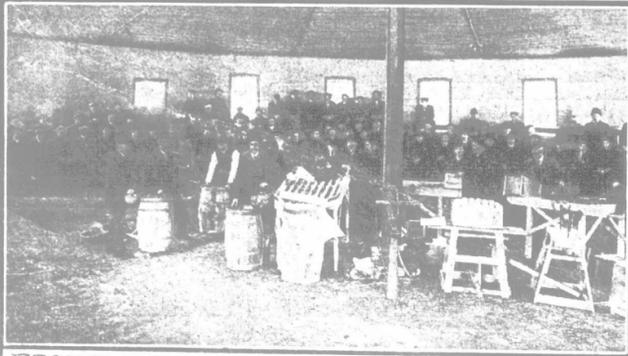
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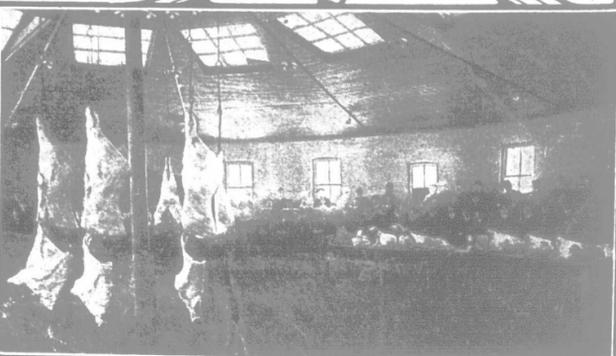
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