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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

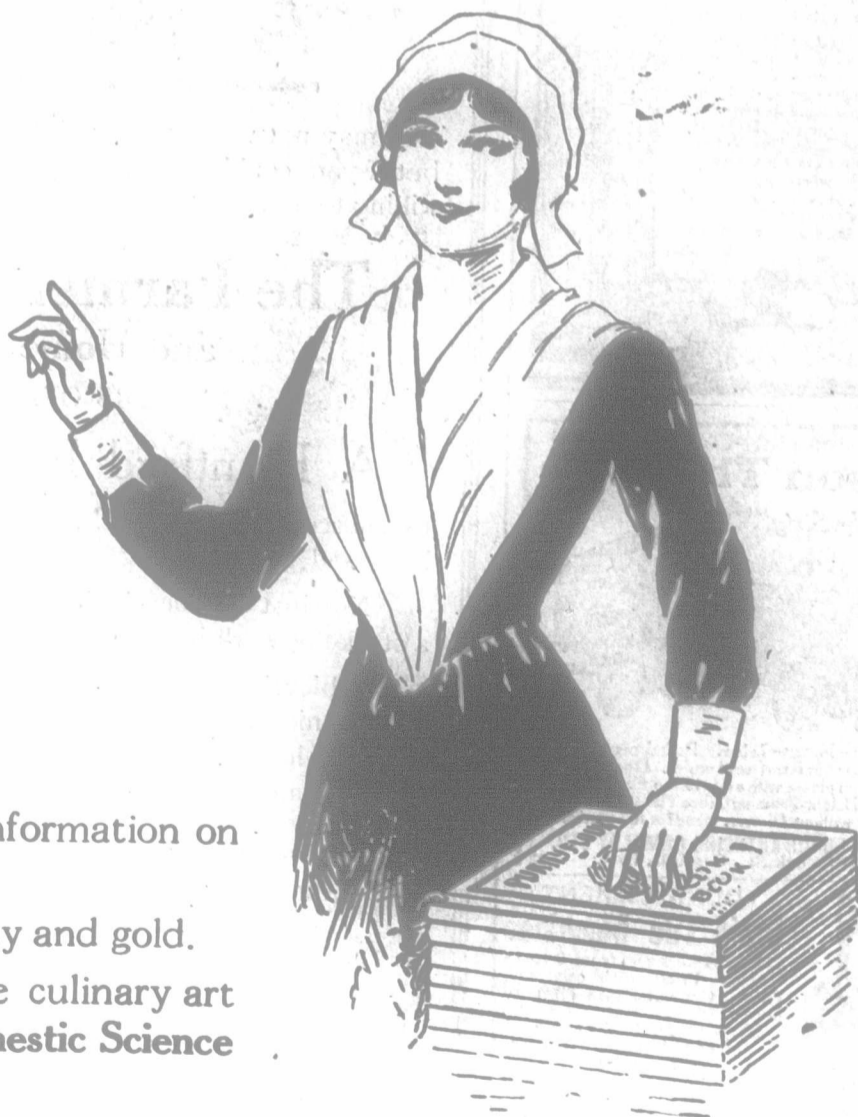
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Vol. LIII.

LONDON, ONTARIO, APRIL 4, 1918.

No. 1332

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180 pages of the latest tried and tested information on the economical preparation of food.

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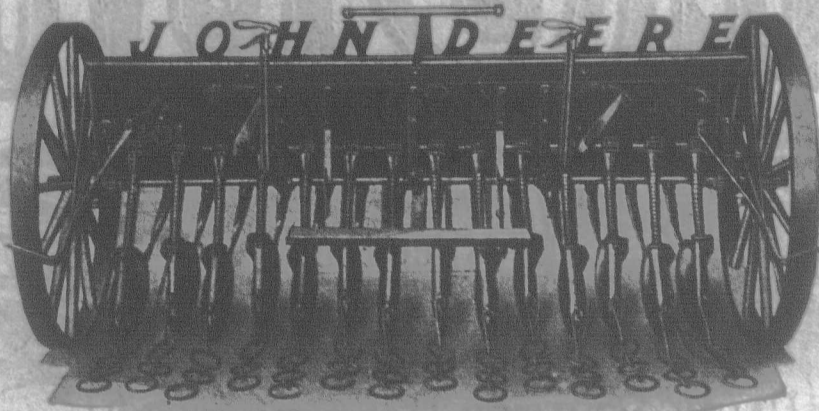
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Sweet Fresh Ensilage down to the last forkful

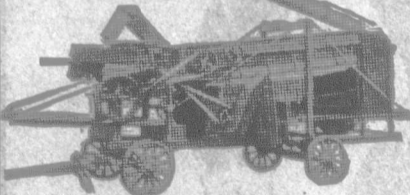
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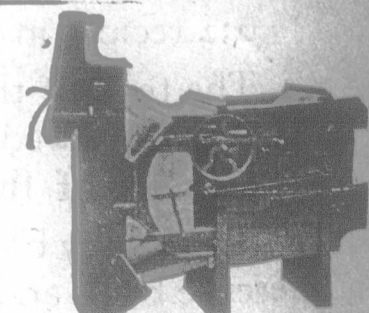
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work in 60 minutes to \$30.00. Write THE BATEMAN 41 Symington

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The Long-Life Roofing

For Farms, Factories and Railway Buildings

STUDY the roofs in your neighbourhood, particularly those that have been up for 10 years or more. Now, as a guide to the roofing YOU should buy, remember that Paroid Roofs laid 19 years ago are still giving excellent service. Could other roofings equal this record at anywhere near the same first cost?

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IRON AGE Combined Hill and Drill Seeder solves the garden labor problem. Takes the place of many tools—stored in small space. Sows, covers, cultivates, weeds, ridges, etc., better than old-time tools. A woman, boy or girl can push it and do a day's hand-work in 60 minutes, 30 combinations, \$4.50 to \$30.00. Write for booklet.

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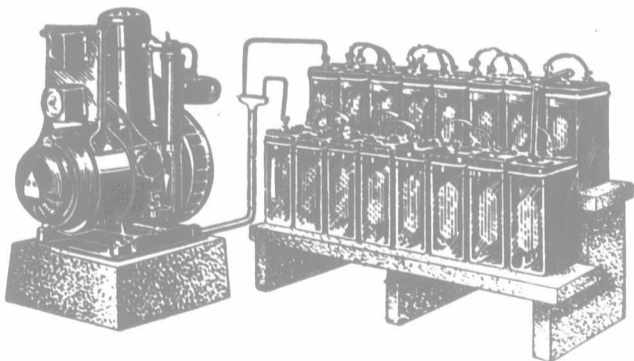
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These Should be Included in Your Order

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These tools enable you to cultivate triple the acreage

They are so scientifically constructed that you can do 3 to 6 times as much as with old-fashioned tools in the same time, and get bigger and better crops because of more thorough cultivation. 45 years of practical farming and manufacturing experience is back of every Planet Jr. Fully guaranteed.

No. 4 Planet Jr Combined Hill and Drill Seeder, Wheel-Hoe, Cultivator and Plow sows all garden seeds (in drills or hills), plows, opens furrows and covers them, hoes and cultivates all through the season. A hand machine that does the work so easily, quickly and thoroughly that it pays for itself in a single season.

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Illustrates Planet Jrs doing actual farm and garden work, and describes over 55 different tools, including Seeders, Wheel-Hoes, Horse-Hoes, Harrows, Orchard, Beet, and Pivot-Wheel Riding Cultivators. Write postal for it today; also name of nearest agency.



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For 4 furnish est Quality. Se adapted for a climate. Thou omers attest seeds are all t germination and take chances but write at Catalogue.

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UNEQUALLED VALUE AT OUR LOW PRICE

Pump has steel standard, adjustable Base, and reversible Handle Bearer. It is fitted complete with 3x10-inch cylinder, having brass valve seat and malleable iron plunger-cage. Takes pipes 1 1/4 inch size and has a 6-inch stroke with capacity of 365 gallons per hour. Made Anti-freezing.

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are sometimes called plough shoes or harvest shoes because they are especially designed for wear in the ploughing and harvesting seasons.

You will not be troubled with tired, aching feet after doing a hard day's work in Palmer's Summer Packs, because they are light in weight, durable, roomy, comfortable and waterproof.

Ask your dealer for a pair of these. “Moose Head Brand” shown above is stamped on every pair.

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IRON AGE

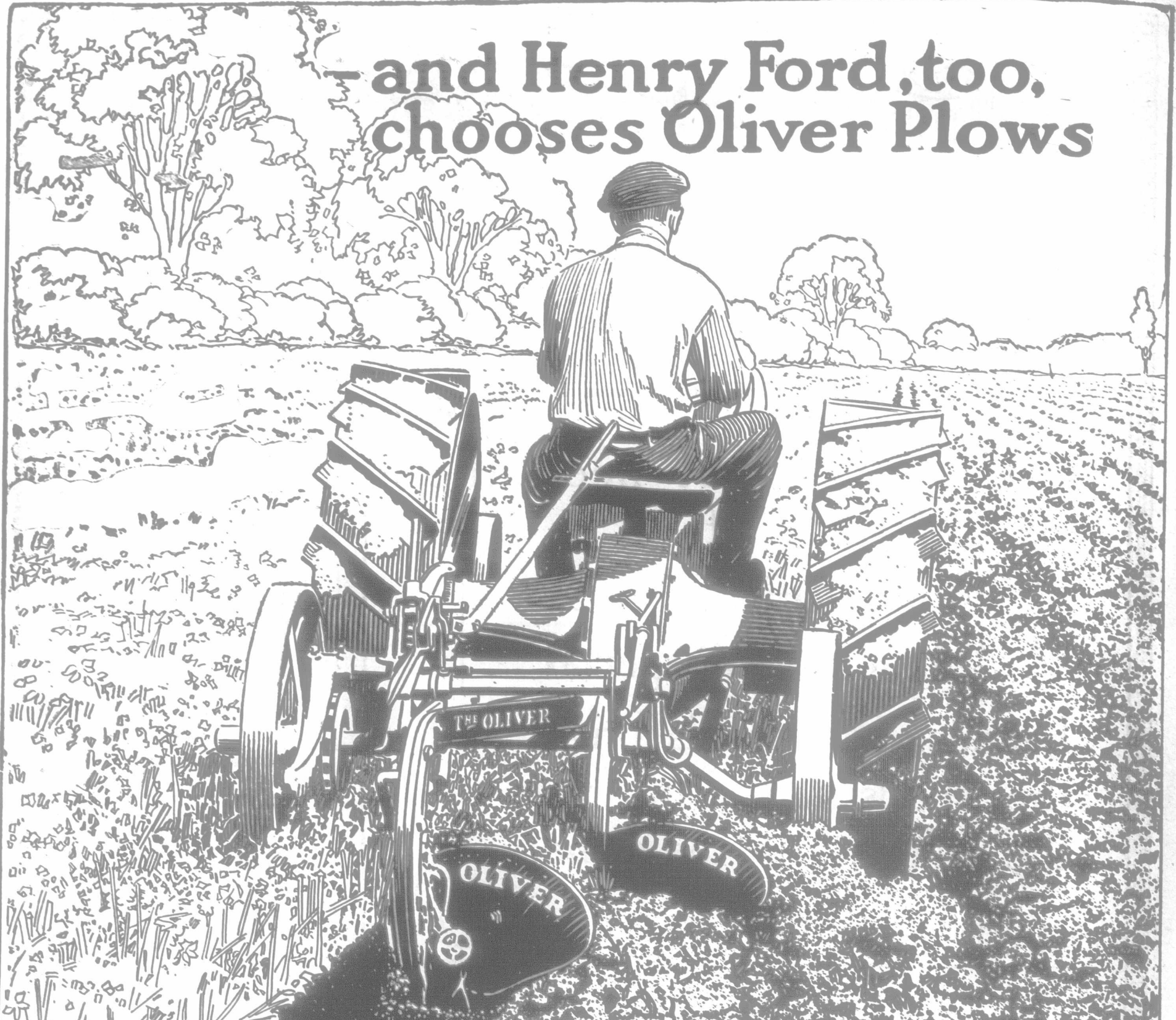
Farm, Garden and Orchard Tools
 Answer the farmer's big question: How can I grow crops with less expense and labor? How can I grow fancy fruit at low cost? The **IRON AGE Barrel Sprayer**



(horizontal) solves the spraying problem for the busy farmer. Can be used in any wagon, cart or sled. Reliable easy-working pump placed outside the barrel—prevents rusting—all parts easy to reach. 100 to 125 pounds pressure with two nozzles. 50 and 100 gallon sizes. We make a full line of sprayers. Write today for our free booklet.

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"We know that with the Oliver No. 7 plow the Fordson will work to the very best advantage."

[Signed] HENRY FORD & SON

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The Farmer
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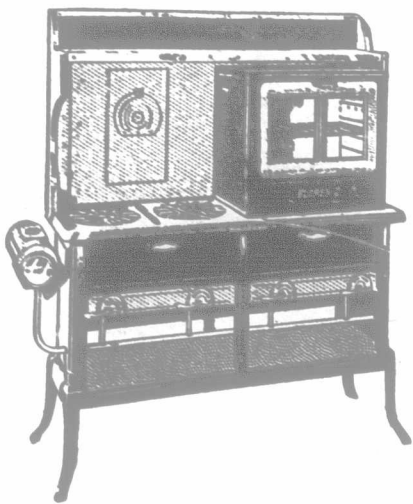
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SAFE, because the oil tank is away from the heat, and because the height of flame cannot vary. Clean, because there are no wicks to smoke or need trimming.

Burners can be regulated to give degree of heat desired, and when not in operation are left completely up out of oil contact. The asbestos lining and dead air space, and glass door of "Success" oven ensure heat retention and visible baking.

An economical cooker and baker, beautiful in appearance.



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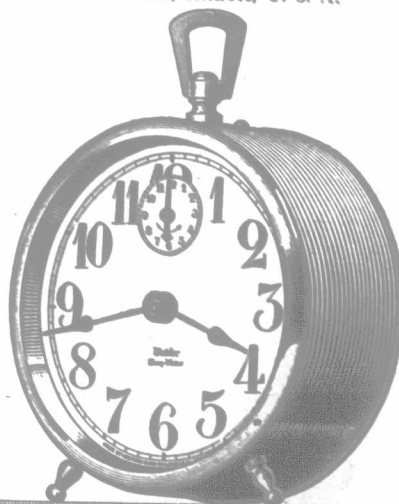
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THE strongest recommendation Sleep-Meter could have is the family name—*Westclox*—on the dial. *Westclox* is the badge of alarm clock quality. Sleep-Meter is proud to wear it.

Sleep-Meter is made by Western Clock Co.,—makers of Big Ben and other *Westclox* alarms—and is easily the best medium-priced alarm you can buy.

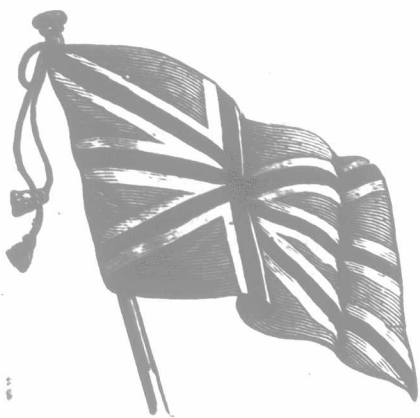
Western Clock Co.—makers of Westclox

Big Ben—Baby Ben—Pocket Ben—Alarm—Lectern—Dental—Sleep-Meter—Bells
La Salle, Illinois, U. S. A.



A Westclox Alarm

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YOU WANT A FLAG FOR THE TWENTY-FOURTH OF MAY

The *Farmer's Advocate* and *Home Magazine* will send you a Union Jack, thirty-nine inches long by twenty-seven inches wide, in return for a small service on your part.

For holidays and patriotic occasions the house doesn't look just right without a flag hanging up, and now you have the chance to get a good one without having to spend any money.

All you have to do to get one of these flags is to help on the work of The *Farmer's Advocate* by sending us the name of *one new subscriber*.

Just cut out the coupon and send it to us with express or money order for \$1.50 and we will send you the flag right away.

■■■■■■■■■■ Coupon ■■■■■■■■■■

THE FARMER'S ADVOCATE AND HOME MAGAZINE, London, Ont.

Gentlemen, I am sending you the name of one new subscriber with money order for \$1.50 for same. Please send me the Union Jack you advertised.

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The Handy Scales for Farm Use

Here is the handiest weighing outfit ever designed for farm use. Convenience and service are the chief features of the

Fairbanks Farm Scales

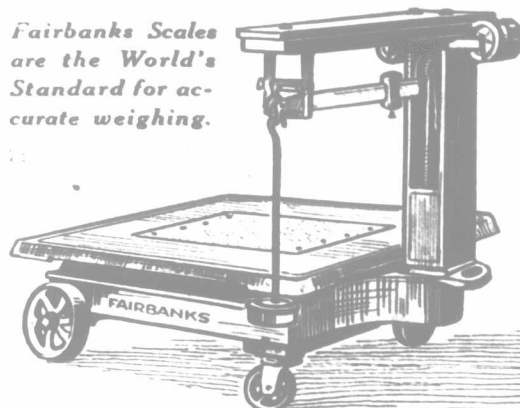
The handle at the base of the weighing post permits of ready transportation on its own wheels to any part of the farm buildings. In house or barn or dairy it serves any purpose up to 2000 pounds capacity.

The Fairbanks Portable Farm Scale has a low weighing post, is compact and absolutely accurate. The platform is 34 x 25 1/2 inches and has a clearance of 11 3/8 inches above the ground.

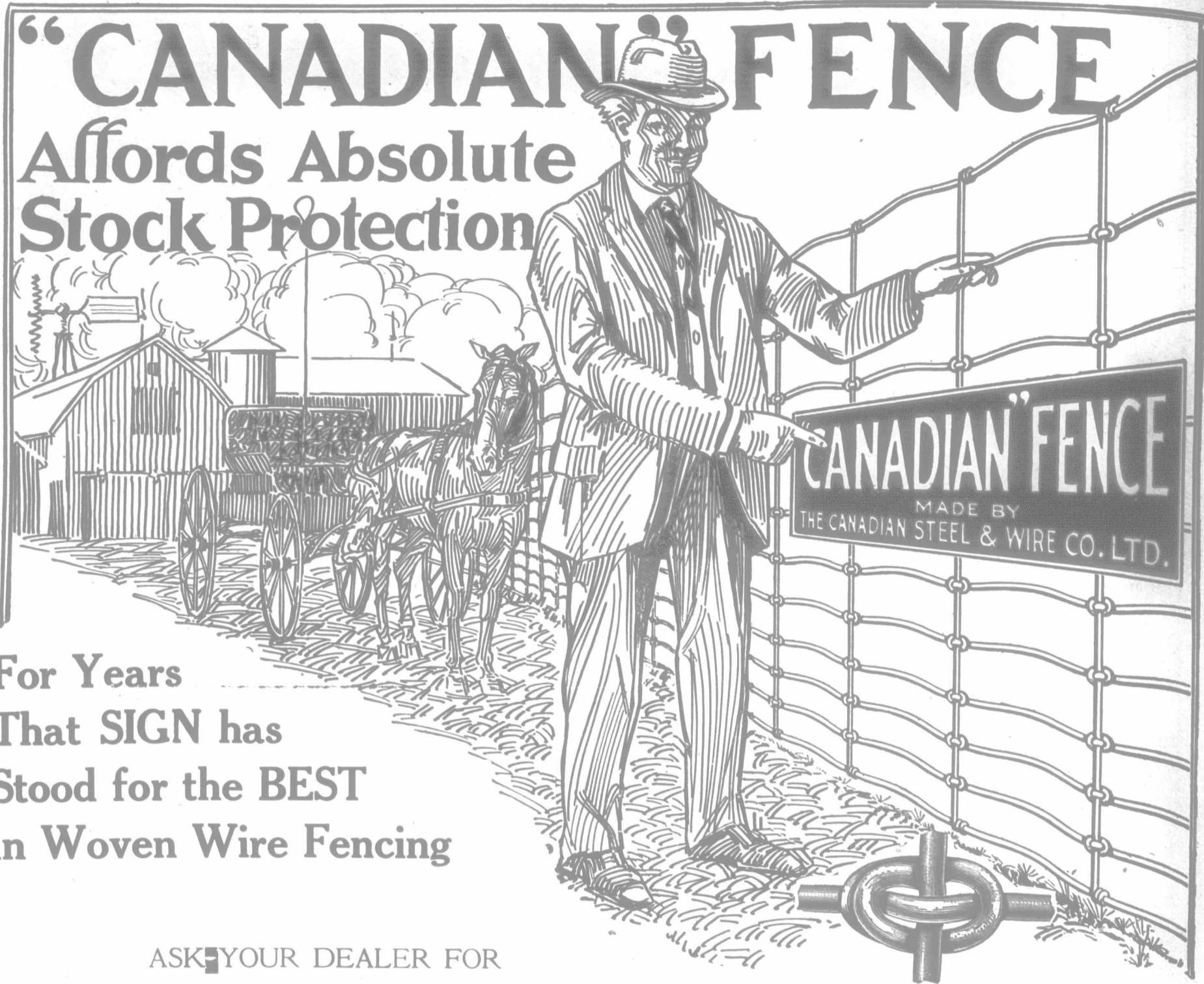
Write our nearest branch for full details of this and other types of scales.

The Canadian Fairbanks-Morse Co., Limited.

Fairbanks Scales are the World's Standard for accurate weighing.



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Affords Absolute
Stock Protection

For Years
That SIGN has
Stood for the BEST
in Woven Wire Fencing

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the horses.

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The Farmer's Advocate and Home Magazine

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1866

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875

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LONDON, ONTARIO, APRIL 4, 1918.

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EDITORIAL

Treat all seed for smut.

Try a little spring wheat.

Sow plenty of seed, but do not waste by over-seeding.

Roll all the meadows as soon as the land will bear the horses.

Are you planning to increase the horse power on your farm?

If feed grows much scarcer it will be "Root hog or die" in earnest.

The publication of the ship losses will only set the Allies to the task.

Remember Verdun! The line held then and it will hold again.

Whether or not it paid Von Hindenburg to advertise may soon be known.

Do not forget to plan in the seeding operations for a pasture paddock for the pigs.

Sow some mixed crop—barley and oats and perhaps a little wheat also if heavy feed is desired.

A prophecy is made in an article entitled, "Can We Really Co-operate?" published in this issue.

Some people are learning from experience that it is better not to talk at all than to speak too loudly.

Those who paid high prices for feeder cattle last fall will be careful when they lay in their next stock.

Germany swallows little nations singly, but will choke to death in the attempt to down them all en bloc.

Let nothing be left undone in the work of re-establishing returned heroes in some congenial occupation in Canada.

The spring offensive in the fields of Ontario is about due. This old Province must go "over the top" in production this year.

The civilized world prays that the Allied west front holds. The Kaiser's legions may meet their Waterloo before this summer is over.

All too many people still persist in keeping their backs to the land. There will have to be a right about face some day. All cannot live in cities.

There is generally a bigger crop to thresh on the farms well stocked up with farm animals than on those upon which little attention is paid to live stock.

They are reported to be on the land earlier than ever in the West. An early seeding means a good deal toward large crop returns. It makes for a bigger acreage and greater yields.

The maple syrup crop in Western Ontario, at least, does not promise a bumper yield, but good weather for sap is generally bad weather for wheat and grass, and we need the wheat and feed more than we do sweets anyway.

The Boy You Get.

This year, as last, a campaign has been put on to secure boys of 'teen age for the farms, and according to all accounts many are answering the S. O. S. signal and are signing up. We understand that it was at first hoped that 25,000 would be available, but these figures are going to be exceeded by perhaps 10,000 or more. Our hats are off to the boys who are willing and ready to do what they can. We have talked with farmers who had the lads last year and most found them useful and satisfactory. Although not able to fill the labor-shortage gap, they were a real help. Of course, a few did not fit in. They got blisters on their hands and their backache inclined them on the hoe handle, and they got homesick and work-sick. But there were only a few of this sort. Most were manly fellows who laughed at the blisters, straightened the kinks out of their backs, mastered the job and made friends on the farm. The farm also stood to gain, for many of the boys developed a liking for agriculture and things rural. Let us hope that this year's effort will be a greater success. The boy has responsibility and the farmer has his also. A great deal depends upon the treatment the lads get as to the success of the venture. They cannot take the place of trained men. No one should expect it. They cannot do heavy work, but, if willing, there are many jobs on the average farm that they can do and in this way they can do their bit. The lads are at an impressionable age. Character will be formed in part, during their summer's work on the land. They will form their ideas as to farming and agriculture from their summer's experience. The farmer should see that the boy he has gets the proper viewpoint. "Character grows strong and clean on the land." The farmer can help the boy. The farmer has a responsibility. Make the boy like the country. Teach him to work hard but do not make it drudgery. Help him to enjoy his work by explaining it to him. The why and the wherefore count with every boy. And boys should give good service. They are going out to work not to "make" examinations or to "put in" time. As the farmer and his wife are kind and considerate to the boy, he should also be appreciative, gentlemanly and ready to do his part. Boys are not men, but they can be mighty close to it. Give them a chance.

The Great Problem—Farm Labor.

In another column in this issue a hired man gives his views on the farm labor situation. Those who would have men in large numbers return to the farms should read this article. He has figured out that the wages paid to female hired help on the farms last year would amount to about one dollar per day, and to hired men about two dollars per day for the year. These, says our correspondent, are not big wages. We have contended in articles published in recent issues that farmers as a class, cannot pay wages to compete with city industry. The proof is plain to be seen. Men and women of the working class have left the country for the city and there remain. Why? Because they get bigger wages, have shorter hours and think they have an all round better time. Some hired men say that the reason they have left the country is because farmers are too mean to pay fair wages. This is not so. Farmers are willing to pay all they can afford to, taking into consideration the work done and the returns which the farmer gets for that labor. Profits in farming have not been such as to encourage either the hired man or the farmer himself in many cases to stay in the country, and we find a large proportion of men who once farmed for themselves now working in the cities because their wages in the cities amount to more than they were able to make on the farm. It is not only the hired men and hired girls who have gone to the cities, it is farmers' sons and farmers themselves. Farming has not been the job it should have been for either farmer or farm laborer,

and many of both classes have sought employment elsewhere. Let no one blame the hired help for going where it can do best, and let no hired help or others blame the farmer. There is a good reason why farmers have not paid big wages in the past. They could not afford to and the fact that they, in large numbers, have left the farms for other work is proof sufficient. When prices for farm products advance as they have done in recent years, prices of everything else advance and the farmer with regard to hired help and returns is still at a disadvantage. Wages went higher and higher in the cities. Big returns and the chance for bigger profits boosted wages all around, and as wages went up everything the farmer and consumer had to buy advanced in greater proportion. Farmers still cannot compete in the labor market and men and women work elsewhere. The farmer cannot blame them. They cannot blame the farmer, and the city dweller can blame neither. Some radical readjustments are yet necessary before the farm can compete with the factory in the labor market. A few years ago the farm laborer got little for his work. His wages have trebled. When the farm laborer's wage was low, the returns from the farm on which he worked were not enough to leave its proprietor even the then low laborer's wage, in many cases. Both left the farm. To-day the wages for the farm laborer are higher and the returns from the land are greater, but cost of living for the laborer and increased cost of production for the farmer have cut a big hole in net returns, and the city still has the advantage. When the city employer of labor pays high wages he figures to get a profit on these higher wages, and sets the price of his product accordingly. When the farmer pays high wages he must depend upon someone else to set the price of his product. There is a big difference—a wide gap to bridge, but all classes are coming closer together and a solution of the great problem may yet be found. In the meantime let none cast slurs at others. All classes of the community are more or less to blame for the present state of farm labor affairs.

Treatment For Bad Roads.

The Farmer's Advocate has for many years explained to its readers the advantages of using a split-log drag to smooth off the road early in the spring. The drag, properly used, is always a success and the wonder is that its use is not more universal. Go where you will at this season of the year mud roads are found rough and generally in bad condition, but where the roads have started to dry and the drag has been used they are smooth and in the best possible condition to shed water and dry up thoroughly. If you haven't tried a drag in your locality now would be a good time to start. A little co-operation among farmers in this work would soon make miles and miles of better roads. Make a drag and use it on your lane and in front of your own place. Your neighbor will soon follow and in a short time the value of the treatment for bad roads will be known over the entire country.

The Crime of the Century.

The crime of the century is the slaughter in Europe, and that crime is of the Kaiser's own making. War at any time is hell, but war which drives countless hordes in solid formation into the mouths of cannon, into the hail of machine gun bullets, into the battering barrage, line on line and regiment on regiment, only to destruction, in the hope that by sheer weight of numbers those who remain trample over a pavement of the corpses and wounded of their own comrades to the lines of devastation which were their objective, sinks to lower depths than that expressed by General Sherman. The Kaiser's ambition for world power stops at nothing. His troops are merely a means to an end. If they suffer and die it matters not to him and his war lords so long as they gain the mastery. Their men make

The Farmer's Advocate

AND HOME MAGAZINE.

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fine targets for the gunners of the Allies when they come forward, and if they attempt to go backward they are shot down by the officers who march in the rear with revolvers drawn. The power to make cannon fodder of his people is still the Kaiser's, but it is waning. This war must be fought to the point where no man in any nation can exercise the brutal right of making cannon fodder of any human being. This is a fight to the end and that end is the utter extinction of autocracy. No man who values human life so little should ever again be allowed power over any people. The people themselves must rule. These may be dark hours, but all those who believe in right against might have faith that sooner or later the mad dog of Europe will find himself face to face with a power of the people that will give him his just deserts.

A Few Good Stories.

BY SANDY FRASER.

I hae been laid up for a week or mair wi' an attack o' the sciatica, havin' been caught in the only shower o' rain that we hae had this winter. If there's a chance for me to be in trouble that's where I'll be, the auld wumman says, but, as I tauld her, it wis no' my fault this time, it wis just one o' those accidents that will aye be happenin' to the best o' men. "And na doot," says I, "there will be compensations to mak' up for this trouble I'm makin' for ither as weel as for mysel'." Maybe the meenister will come tae see us noo, for one thing. And sure enough, the vera next afternoon wha should rap at the door but oor auld preacher, Mr. McEwen. And he had hardly got through inquiren' after my health an' givin' me a wee bit o' advice on the subject o' acquiren' sufficient knowledge tae keep me in oot o' the wet, when in walks Duncan McGregor, him that's such a hand to be tellin' queer stories, ye mind. "Noo, we ought to be in for some entertainment," says I tae mysel', "if I ken enough noo tae interrupt these twa claps. It's no sae lang since they were baith in Scotland, but they will be havin' a few yarns to tell one another about the auld times."

"Weel, Mr. McGregor," says the meenister, after he had shaken hands wi' Duncan, "I'm glad to mak' yer acquaintance. The McGreggors were an auld and honorable clan. I remember when I was a young man in the auld land once preaching a sermon in which I wis referin' to the glory o' King Solomon, an' spoke of the thousand camels that were part o' his live stock. After the service was over an auld woman, by the name o' McGregor, came to me an' says she, 'Ye say there wis a thousand Camells, do ye?' I ken weel that the Campbells are an auld clan but look again an' tell me gin ye dinna see onything about the McGreggors."

"Aye," said Duncan, "I dare say ye'd find an odd one in oor bunch that wad say a thing like that. But what dae ye think of the shape oor friend Sandy here has got himsel' in noo? Dae ye think we'll have to be takin' him to the bush this time, or dae ye think it's worth while tryin' to winter him?"

"Oh, he'll see spring all right, wi' a wee bit o' care," replied the meenister. "But he reminds me o' a farmer's wife that I used to hae in my parish in Scotland. She had been sick for a guid many years an' used to sit all day in her chair by the hearth. I went in to see her once as I was passing, an' in the course o' conversation I got intae an argument wi' the auld farmer himsel' on the subject o' the resurrection o' the body. I couldna seem to mak' the man understand how a dead body could rise again, but finally he seemed to get an idea. 'Weel, weel, Mr. McEwen,' he said, 'ye're right sae far; you an' me that are strong, healthy folk, may rise again, but that pair thing there whar she sets, she'll ne'er rise again.'

"However," went on the minister, lookin' at me, "I hae better hopes o' Sandy than that."

"I suppose ye hae had some kind o' quare experiences in yer time, Mr. McEwen," said Duncan, gettin' ready to take his turn at the story tellin'. "I wis talkin' to a preacher the ither day that wis givin' me an account o' some o' the people an' places he'd been acquainted wi' in Scotland in his early days. He tauld me about a baptism that was performed once in the Highlands by a meenister o' the church next his ain. It seems that the parents o' the child that wis to be baptized lived at quite a distance from the minister's, so they agreed to meet at a certain spot half-way between the two places and perform the ceremony there. But it happened that there wis a sort o' mountain stream near the meetin' place, an' on account o' the rains it had got that wide that neither o' the parties could get across to the ither. The meenister was bound he wouldna postpone the affair, so he tauld the feyther to hold the child oot as far as he could an' he wad try an' see if he could get the water on it. Every time he would lash the water oot he wad say, 'Hae ye got ony o' that?' An' Donald wad say, 'Deil a spainge,' until the meenister was weel-nigh played oot. At last, however, a wee drap o' the water got tae the bairn's face an' after that they were able to go ahead an' finish the ceremony accordin' tae the law an' order. Donald had brought a little whiskey wi' him for the entertainment o' the party, but accordin' to the story he concluded not to risk throwin' ony o' it over to the meenister in return for his trouble."

"Weel," said Mr. McEwen, when Duncan had finished his story, "That's one way to get around a difficulty. It's pretty nearly as guid as the plan that an auld friend o' mine had. If there happened to be no water handy at a baptism he wad juist wet his fingers by touchin' them to his tongue an' go ahead wi' the ceremony. I suppose it wad be what ye might call fulfillin' the letter o' the law onyway."

"While we're on the subject," began Duncan again, "I may as weel be tellin' ye another story on the ministers. It's no' every day that I get a chance to tell it to a real preacher. Maybe ye've heard o' the Reverend Ebenezer Erskine wha was pastor o' a small church doon in the county o' Kinross? Onyway, he finally got a call to a better church at Stirling, but he thought he wouldna' tell his ain people about it till he was juist aboot leavin'. But they got wind o' it an' one day one o' the auld wives got at him about it. Says she, 'Weel, sir, I'm tauld ye're gaun tae leave us.' 'Wha tauld ye that?' said the minister. 'Wha tauld me, sir. It's e'en the clash o' the kinty, sir.' 'Aye, but Margaret ye ken the clash o' the country is no' to be depended on. Hae ye no better authority than that for sayin' that I'm gaein' to leave ye?' asked the preacher. 'Aye, I have that,' replied the auld wumman, 'I see ye havena' been diggin' ony peats yet for yer winter's fire. That doesna' look as though ye were minded to spend muckle mair o' yer time wi' us.' This shot brought the poor Ebenezer to his knees. 'Weel Margaret,' he said, 'Ye ken we're the Lord's servants an' we have to obey his call. If he has a work for me to do in Stirling it's my duty to perform it.' 'Feuch!' cries Margaret, 'call here, call there; I've heard that Stirling has a great muckle stipend; and I'm thinkin' that if the Lord had gi'en ye a call doon tae the wee church at Auchtertool ye wad ne'er hae litten on ye heard Him.'"

When Duncan had finished his story Mr. McEwen says to him, "I see ye like to be takin' a fling at us meenisters a'richt. However, I'm willing to admit that we think about the almighty dollar once in a while, like the rest o' humanity."

"Sure," replied Duncan, "ye've got to. No man can live on brains alone. Which, beggin' yer pardon, reminds me o' another story. Just a wee one. It wis near Edinburgh an' one o' the college professors frae that toon wis oot takin' a walk one day when he met a sort o' a daft character that had been running loose in those parts for a number o' years. 'Here Jock,' says the professor, thinkin' to get some fun oot o' the chap, 'tell me, how long can a person live without brains?' 'I dinna ken,' replied the fellow, scratching his head: 'how lang hae ye lived yersel', sir?'"

Wi' that Duncan took himsel' off, after sayin' good-bye to the meenister an' warnin' me to be civil tae the auld wumman for a week or so till I'd got my strength back again. "As ye are," says he, "ye can neither fight nor run."

The strain of the country's business affairs is sending a number of Canada's leading men South for their health. These are strenuous times and Canada needs all her big men. May their recovery be rapid.

Nature's Diary.

Canada from Ocean to Ocean.—XIV.

When we pass over the "Great Divide" and cross the valley beyond we reach the Selkirks. The flora of this mountain range differs considerably from that of the Rockies, and the reason for this difference is found in the greater precipitation, and consequently more humid climate, of this range. Vegetation is as a consequence more luxuriant.

In the Selkirks the Lodge-pole Pine, Engelmann's Spruce and Alpine Fir are replaced by the Douglas Fir, Mountain Hemlock and Yellow Cedar,—trees which have spires with far broader bases than those of the Rockies. The undergrowth in the Selkirks is much denser than it is in the Rockies, and the alpine meadows are far better developed.

These alpine meadows are open spaces just above timber-line which throughout the spring and summer are decked with a gorgeous array of flowers of varied hues, which in places are so profuse and brilliant that it seems as if nature had spread a carpet of rainbow colors. Notable among the flowers which grow in these meadows are the Giant Adder's-tongue, with its large, yellow blossoms, the Globe Flower, with its wealth of blossom, the scarlet Painter's Brush, the blue Larkspur, the crimson Monkey-flower, the yellow Monkey-flower and the pink and purple Asters.

The fauna of the Selkirks is not very different from that of the Rockies, the Mountain Goat, Grizzly, Hoary Marmot and Dipper being common to both.

After we leave the Selkirks we come to the elevated plateau between them and the Coast Mountains which is known as the Dry Belt. This region has a very characteristic appearance. There is no forest in the usual sense of the word, the main tree being the Yellow or Bull Pine, which occurs dotted singly over the landscape. The most characteristic plants are the Sage-brush and Prickly-pear Cactus.

Leaving the Dry Belt we pass into the Coast Mountains and down their western slope to the Pacific. There is no region in Canada in which we find such a diversity of habitats for animals and plants as on the Pacific Coast. The Pacific Coast is remarkable for the fact that the mountains border along the sea, so closely indeed in some places that if a rock rolls down a mountain-side it rolls into the ocean. Thus in a very limited area one finds dense forests, bogs, swamps, marshes, swales, lakes, streams, timbered mountain slopes, open slopes above timber-line, glaciers, rock-slides, sand beaches, lagoons, salt marshes, rocky shores mud flats and salt water of varying depths.

There are a great many plants and animals which are characteristic of the Pacific Coast. One of the most striking features of the vegetation is the forest of huge conifers and the extremely dense undergrowth which prevails at low elevations. The main trees which make up this forest are the Douglas Fir, Yellow Cedar, White Fir, Sitka Spruce and Western Hemlock, all huge trees which tower to heights of from two to three hundred feet, and which have a diameter of from ten to fifteen feet. Most notable among the deciduous trees are the Large-leaved Maple with leaves from twelve to fifteen inches across, and the Western Dogwood, a tree which reaches a height of from forty to seventy feet, and when in bloom is covered with large, white flowers. Another very conspicuous tree is the Arbutus Tree, with its large, oval, evergreen, shiny leaves and reddish-chocolate-colored bark.

There are a host of shrubs which are characteristic of this region, certainly the most striking when in flower being the Western Spiraea which bears such a profusion of large panicles of white flowers as to appear in the distance like a snow-drift. The Salal, the Salmon-berry, the Red Blueberry, the Oregon Grape, are all common and striking either on account of foliage or fruit. Of herbs there are likewise a great many characteristic species, and the large Pacific Sword Fern is very common and very handsome.

Among the mammals the most characteristic are the Cougar; the largest cat of North America; the Coast Deer; the Coast Red Squirrel; and the Western Raccoon. Of birds there are a host of characteristic species, among the most notable being the Rufous Hummingbird, with its copper-red back, the Varied Thrush which utters its single long-drawn, whistled note, the Steller's Jay with its plumage of an extremely dark blue, the Sooty Grouse which makes the forest resound with its peculiar ventriloquial booming notes and the Louisiana Tanager with its brilliant plumage of red and yellow. Among the amphibians, reptiles and insects also there are many species peculiar to this region.

When we turn to the life of the ocean we find, both in fauna and flora, a great luxuriance and an immense diversity—such a host of forms, many of them bizarre and unique, that a volume might well be written about them.

We have now concluded our brief survey of the wild life of Canada as seen in a journey from ocean to ocean. We have seen that we have a tremendous variety of plants and animals, that every region is rich in opportunities for the study of nature. May our wild life be protected by just laws and by enlightened public sentiment so that we may hand on to succeeding generations a beautiful country with a wealth of wild life and not a long list of extinct species.

(Finis.)

Those interested in gasoline and kerosene engines will find an article of value to them in this issue. Prof. W. H. Day explains how a gasoline engine may be made suitable for using kerosene as fuel.

Whether or classed as wound time is fast applicable to occur, spent the winter cussing the sub teamsters have shoulders in hor will, in most ca occurs notwiths all care should that the collar f thoroughly dried fitted, and the should be remo even for a short dry, allows a ci which causes it spired freely it with cold water, and the should course, entails o shoulders, remov hair. If, after collar is scraped before being put lift it forward of ing, to allow a c placed, being ca the collar and sh will result. Wh for work in the s soon as the stat events the hair s the shoulder wit This precaution Some horses ap shoulders, of wh quiring specific tr form is what is k of scalding cause spots affected bec falls off and the appearance. If trouble, and the soon become enti

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In some cases This is a case in w but the centre of t and thereby prevent off. In cases of t be severed from the and the raw surfa there is the forma two kinds, viz., se by a bruising of very quickly, an notice a swelling of lation we readily d skin. This fluid is looking, containing When it exists in is put to work, it extent, but re-for patient is at rest, tumor gradually i and tender. Trea tumor at the lowes Then the cavity sh with warm water, of carbolic acid, o jected into it un purulent abscess, more serious. It swelling which is p creases in size, and

THE HORSE.

Wounds—V. Sore Shoulders.

Whether or not sore shoulders can be correctly classed as wounds, may admit of argument, but as the time is fast approaching when such conditions are very liable to occur, especially in colts and horses that have spent the winter in idleness, we may be excused for discussing the subject under this head. The majority of teamsters have had more or less experience with sore shoulders in horses, and, while proper care and attention will, in most cases, prevent the trouble, it sometimes occurs notwithstanding all reasonable care. Of course, all care should be taken to prevent it, such as seeing that the collar fits properly, is kept perfectly clean, and thoroughly dried when off the horse, the hames properly fitted, and the draft properly adjusted. The collar should be removed when the horse is in the stable, even for a short time. This allows the collar to become dry, allows a circulation of the air over the shoulder, which causes it to become cool. After a horse has perspired freely it is good practice to bathe the shoulders with cold water, to which has been added a little salt, and the shoulders then rubbed until dry. This, of course, entails considerable work, but it cools off the shoulders, removes all matting of, and all dirt from the hair. If, after this precaution has been taken, the collar is scraped and brushed until thoroughly clean before being put on again, and a little trouble taken to lift it forward off the shoulder when the horse is standing, to allow a circulation of air, and then carefully replaced, being careful that no mane is allowed between the collar and shoulder, it is seldom that sore shoulders will result. When horses with long coats are required for work in the spring it is good practice to clip them as soon as the state of the weather will permit. At all events the hair should be clipped off those portions of the shoulder with which the collar comes in contact. This precaution tends to prevent shoulder trouble. Some horses appear particularly predisposed to sore shoulders, of which there are several forms, each requiring specific treatment. Probably the most common form is what is known as "collar gall," which is a form of scalding caused by friction and heat. The spot or spots affected become sore and tender, the hair gradually falls off and the skin assumes a red and partially raw appearance. If no means are taken to arrest the trouble, and the horse continues to work, the parts soon become entirely denuded of hair and raw.

In treating this, or, in fact, any form of sore shoulders, where expedient, the patient should be given rest until a cure has been effected, but unfortunately it is not always possible to give rest, and while many claim that it is cruelty to animals to work a horse with sore shoulders, under any conditions, and few will deny this, at the same time when it is necessary to either work him or allow the work that must be done at the time to go undone and owner suffer considerable loss, we can excuse a man for working his horse, but he should do all he can to effect a cure, and while it is hard to effect a cure under these conditions in many cases it can be done, and at least care and attention will minimize the animal's suffering. In most cases there are old collars that have been practically discarded, and one of these can often be used to advantage. If it be a collar that has been re-faced and re-stuffed, the outer facing may be cut away and the filling pulled out of the part that presses upon the sore spot, or the part can be pounded with a hammer until a depression is formed, or a sweat-pad can be used in this way. Any device that will lessen pressure upon sore spots, and at the same time not cause a roughness or undue pressure upon other parts will give relief. Whether or not this can be done, care as to cleanliness, etc., already noted, and the frequent application of a cooling astringent lotion, will give relief and in many cases effect a cure. Probably the best application is one made of an ounce each of acetate of lead and sulphate of zinc in a pint of water. This lotion should be applied frequently, and especially as soon as the shoulder has become dry after washing and rubbing, and before the collar is again put on.

In some cases we notice what is called a "Sit Fast." This is a case in which the skin has sloughed in a circle, but the centre of the surrounded surface remains healthy and thereby prevents the sloughed portion from dropping off. In cases of this kind the healthy portion should be severed from the flesh, with a knife, the piece removed, and the raw surface treated as above. In other cases there is the formation of abscesses, of which there are two kinds, viz., serous and purulent. These are caused by a bruising of the tissues. Serous abscesses form very quickly, and are usually not very sore. We notice a swelling of greater or less size, and upon manipulation we readily detect that fluid is contained under the skin. This fluid is called serum; it is thin and watery looking, containing a very small percentage of blood. When it exists in quite small quantities, and the horse is put to work, it disappears by absorption to a certain extent, but re-forms in greater quantities when the patient is at rest. If this practice be continued the tumor gradually increases in size, and becomes sore and tender. Treatment consists in freely lancing the tumor at the lowest part, to allow escape of the serum. Then the cavity should be well flushed out twice daily with warm water, and a little of a five-per-cent. solution of carbolic acid, or one of the coal-tar antiseptics, injected into it until it heals. Rest is necessary. A purulent abscess, one that contains pus or matter, is more serious. It forms more slowly. We notice a swelling which is painful to the touch. It gradually increases in size, and in some cases manipulation will not

detect fluctuation. The walls are quite thick and it is sore. Treatment consists in lancing freely as for a serous abscess. When the walls are quite thick, with no soft spot, it is well to explore for pus, by cutting through the skin and then forcing a probe or director into the centre of the tumor in search of pus. It is sometimes not possible to discriminate between a purulent abscess and a fibrous tumor without such exploration. If no pus be present, the lump is a tumor. If pus be present, a free opening for its escape must be made and after treatment as for a serous abscess given. If it be a fibrous tumor, it should be carefully dissected out, the wound stitched, except an opening for the escape of pus, and then treated as for an abscess. It is possible to remove tumors by inserting sloughing agents, as corrosive sublimate, arsenic, croton oil, nitric or sulphuric acid, etc., but this is a slow process and such active caustics should be used only by a professional man, and he from experience knows that dissection is the quicker and better method of treatment. WHIP.

England's Shire Horse Show.

EDITOR "THE FARMER'S ADVOCATE":

The thirty-ninth Shire Horse Show of the English Shire Society was held on February 27th at the Park Paddocks, Newmarket, the old Agricultural Hall at Islington not being available. The show, notwithstanding its severely restricted program, was thoroughly representative, and must be regarded as a decided success. Altogether there were 168 entries in the four classes, and among them were several well-known winners.

The two-year-old stallion class had an entry of 43, of which 29 came in for final selection. First prize went to W. J. Cumber's Theale Lockinge, a bay by Norbury Menestrel out of Lockinge Rosa, which has fine quality and character. He is a straight, level horse, with good look-out, and stands over a lot of ground. He is massive in character, and his action is good. For all that, he was somewhat lucky to win, for E. J. Wythe's Pendley Leader, which was second, is a difficult horse to go past. He also is by Norbury Menestrel, and he was the Ashbourne champion in 1916, and the winning yearling in London last year. His head is not so masculine in character as it might be, but in every other respect he stands out as a conspicuously promising colt. J. W. Measures' Quindnuc of Hothfield got a big lift from last year, when he was one of the commended lot. He is a massive colt by Royal Sovereign, with good bone and feather, and good action. Sir Walpole Greenwell's Marden Dagnam, a compact active horse, made a good fourth. J. C. Jackson's Beachendon Thumper, quite one of the right sort, with a good look-out and plenty of power, was fifth; Messrs. Forshaw's Maresham King, a big horse, a little on the coarse side, was sixth; the Duke of Westminster's Pendley John, which was third last year, was seventh.

The three-year-old stallion class had an entry of fifty-nine, and a remarkably level, good-looking lot they were. Sir Walpole Greenwell's Marden Dagnam, who last year was first in the two-year-old class, and won the Junior Cup, was first, a good second to him being the Edgcote Shorthorn Company's Boro' Draughtsman. He is very good on the ground, has capital bone, and moves well. Messrs. Whinnerah's Throble King Carbon was third. He has good legs, a fine look-out, and is full of masculine character. Thomas Ewart's Dunsmore High Cross, a level, well-balanced black, was fourth. Fifth prize went to Forshaw's Crossmore Prince Forester, a bay with great size and power.

Four-year-old stallions also made a fine class. In an entry of thirty-four Mr. and Mrs. Stanton's Harboro' Nulli Secundus, the winning three-year-old last year, was first. He has a beautiful top and outline. Messrs. Forshaw's Timgad, a weighty horse, who is perhaps rather better underneath than the winner, was a very good second, and Mr. Mond's Sundridge Coming King, who was second last year, was third.

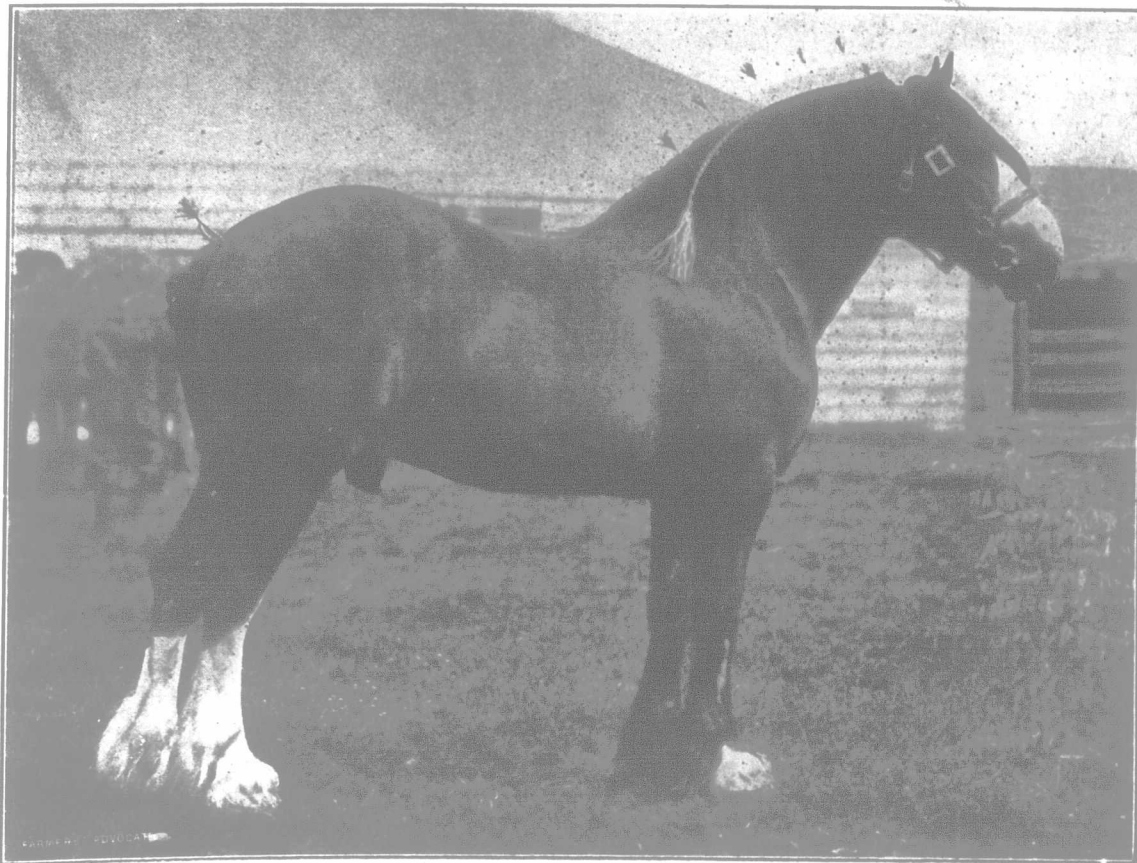
In the class for stallions, five years old and upwards, there were 32 entries. First prize went to Forshaw's famous horse, Rickford Coming King, who was reserve for the championship last year. Mr. Croft's Bardon Hero, a weightier and more massive horse, but with scarcely the quality, was second, and Sir Berkeley Sheffield's powerful Norman by Victor was third. Mr. Higgins' Garden Jupiter, a level, well-balanced bay, made a good fourth, and the Duke of Westminster's Halstead Rob Roy was fifth.

Junior Championship Cup was won by Sir Walpole Greenwell's Marden Dagnam, with Cumber's Theale Lockinge reserve. The Senior Cup was won by Forshaw's Rickford Coming King, and Mr. and Mrs. Stanton's Harboro' Nulli Secundus was reserve. The championship and challenge cups went to Rickford Coming King, with Harboro' Nulli Secundus reserve. I should relate that there were only four stallion classes, all the mare events having been cut out. At the sale top price was 1,150 guineas, given by E. C. Fairweather, a newcomer to the breed, for Sussex Goalkeeper, a son of Champion's Goalkeeper, and hence a grandson of Childwick Champion, R. L. Mond's great old stallion. ALBION.

England's Hackney Show.

The yearly show of the English Hackney Horse Society, confined this time to stallions only, was held at Newmarket, £418 being offered in prize money and the usual cups. This time two classes were included for stallions considered suitable for siring army horses, i. e., artillery horses. These classes were watched with interest by our Remount Department, who, I think have something more than a sneaking regard for the Hackney as a potential sire of artillery horses. The big Hackney stallion, up to size with bone and substance, is the stamp which will bring the breed back to popularity in England, where the cult of the ultra-quality "trapper" has done its best to ruin the breed.

In these two army classes some horses full of power were exhibited. Best of the three-year-olds not exceeding 16 hands high, was John Chivers' Histon Connaught, a dark brown, bred by J. B. Wright, Colne, Huntingdonshire, and this stallion boasts a real lookout, a big barrel, plenty of heart room and steely limbs. By the way, the class was judged on conformation and true straight action—high action not being considered. Second was H. B. Brandt's Capenor Port Stanley. The army best class was that for stallions four years old and over, not exceeding 16 hands high. It was headed by a grey horse, exhibited by H. R. H. the Prince of Wales. This was Findon Grey Shales now eleven years old, and sired by Monson's Walpole Shales, and straining right back to the Shales that George Borrow, the author, raised his cap to and called "greatest horse in Mother England." Findon Grey Shales is a beau ideal, big boned, nay, flatboned, chunky, compact, well-pieced together piece of equine statuary—a majestic horse and proud of it. He was declared the champion of the army section and won the challenge cup of 25 guineas value. He now beat John Jones' Whitegate Commander, a robust ten-year-old son of Terrington Recruit, bred by Lord Ashtown, at Woodlawn, County Galway, in Ireland, where his lordship raises a race of



The Type of Stallion Breeders Should Select.

big strong "trappers" which can do their 15 miles an hour, many hours a day in a conveyance. This Whitegate Commander is a fine upstanding horse and has got some winners in Canada. When shown in London last year he beat Findon Grey Shales, but every panel of judges will differ on the respective merits of these two great stallions.

In the "ordinary" Hackney classes—the tame-cat Hackneys which run about on a bit of string, kind of thing—the champion was W. W. Rycroft's Hopwood King, a chestnut eight year old, bred by Sir Lees Knowles, Bart., the old varsity athlete who once piloted the English University athletes through Canada, some 15 years ago. Sir Lees himself won the four-year-old class with Salford Victor, a son of Knowle Halma and a colt that must be champion some day in London. Other class winners were H. V. Sheringham's Creake Commander and H. B. Brandt's Capenor Addenda.

In Hackney ponies Mrs. A. C. King won two first prizes with Furore and Gaudie and W. W. Bourne took the remaining class and the supreme championship

with Fusee, a smashing, free going stallion which nearly found his way to America. He won in London a few years ago, for Robert Whitworth, his breeder, and an English exporter now in U. S. A. wanted to buy to send out. He would have castrated him first but different counsels prevailed and the pony stayed at home to perpetuate the race.

The sum of £20,500 was awarded at Newmarket in premiums of £105 apiece for thoroughbred (racing) stallions considered suitable for getting hunters. Some good class horses got them and the King's Gold Cup for supreme champion fell to Captain T. L. Wickham-Boynon's Rathurde. ALBION.

LIVE STOCK.

Worms and Crippled Pigs.

EDITOR "THE FARMER'S ADVOCATE":
I have seen a number of enquiries in "The Farmer's

Advocate" regarding crippled pigs, and I thought perhaps my experience might help someone. I was feeding six hogs and was taking particular care of them, and when they weighed about 160 pounds they began to get stiff. They would go lame on the hind legs first, then the trouble seemed to affect their backs. They became almost helpless and would squeal when I went near them. I slaughtered one and in the intestines I found six large worms around ten inches long and about as thick as my finger. The intestines seemed to be thickened around the worms. I gave the remaining five hogs two tablespoonfuls of turpentine in their drink, three times the first week, and they got up and walked about. In two weeks' time they were practically all right. This is my experience with crippled hogs, and I hope it may benefit someone.

Bruce Co., Ontario

JAMES A. PACE.

Note.—Veterinary science very rarely attributes crippling in pigs to worms. However, this is one man's experience.—EDITOR.

Care and Management of the Spring Litter

In response to the country's urgent call, a large number of brood sows have been wintered, with the expectation that their young may be reared to relieve a serious situation. A certain percentage of these sows have already farrowed but the majority will not litter until early in April. Conditions should be right, and attention given such as to ensure rearing as many of the young pigs as possible, for improper feeding or lack of attention means casualties in stock, both young and old.

Prior to farrowing the sow should be fed sufficient to keep her thrifty and well sustained, but not enough to cause her to become fat. Sudden changes in feeding should be avoided and the ration should be kept practically the same as before, but if anything the feed might be made rather more sloppy and green feed or roots could be added. A small amount of oil-cake meal, linseed meal, or ground flaxseed is excellent to prevent constipation, which must be guarded against at all odds. Exercise is of vital importance and if possible get the sow out where she can come in contact with the soil.

The farrowing pen should not be made in the piggyery where larger pigs are kept. The atmosphere of a piggyery seems injurious to young pigs, and where at all convenient the sow should be given a colony pen or a box stall apart from older pigs. For bedding, cut straw or dry leaves are desirable. Some favor giving light, active sows a liberal amount of straw and allowing them to prepare accommodations to suit themselves, but in the majority of cases it is just as well to give them only a moderate amount in order that the young pigs will not become entangled in the straw and perhaps stepped or laid on.

The attendant should be on good terms with the sow and treat her kindly and quietly in order to inspire confidence. This is particularly necessary with nervous or excitable sows.

Guard Rails.

A guard or railing about the farrowing pen is considered essential. It has prevented many a piglet's life from being crushed out as it affords a means of escape should the mother carelessly lie down near the wall. A couple of two-by-four scantling fastened on the wall or partition eight or ten inches from the floor will afford protection. Some have the railing extend eight or ten inches out from the wall thus giving the young pigs plenty of room to get around. Nailing blocks to the wall and then tacking scantling to them makes a good guard at slight expense or effort. Another method is to turn a box upside down against the wall and remove the bottom board from the side facing the pen. This not only affords protection from the dam but the pigs will frequently be found sleeping within the box where drafts are not likely to strike them. The accompanying illustration shows still another form of guard rail which is easy to erect. It is a two by eight inch piece nailed to the wall and held firmly in place by three-cornered pieces of two-inch plank.

At Farrowing Time.

In regard to attention at farrowing time Prof. G. E. Day, writes as follows:

"When the pigs are born, the attendant should be on hand to see that everything goes well. If the pigs are strong and the sow lies quiet, it is better not to interfere. Sows that have been properly fed and given sufficient exercise seldom have difficulty in farrowing.

"If the pigs seem somewhat weak, or if the sow is very restless, it is safer to place the pigs in a well-bedded box or basket to keep them out of the way until all are born. If the pen is chilly, a bottle of hot water placed in the bottom of the basket and covered with a blanket, with another blanket over the top of the basket, will help keep up the vitality of the pigs.

"The pigs should be placed to the teat to suck as soon as possible. The weaker the pigs, or the colder the pen, the more important an early drink of the mother's milk becomes. If parturition is not unduly protracted, and if the pigs are strong, lively, and comfortable, they may wait for their first drink until all are born, but in such matters the attendant must use his judgment.

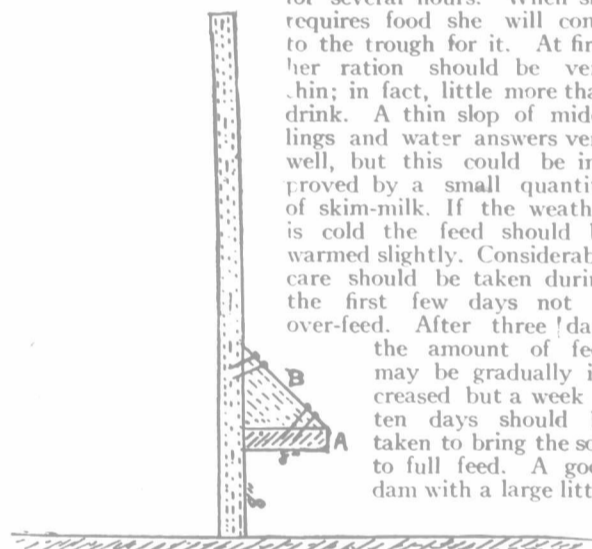
"In cases of difficult parturition, a pig that is apparently lifeless can often be revived by opening its mouth and blowing into it. To be successful, this operation must be performed as soon as it is born. A

chilled pig can sometimes be revived by immersing up to the neck in water heated to a temperature of about 98 degrees. When removed from the water, it should be rubbed dry, and induced to suck if possible.

"As soon as the sow appears to have settled down quietly, it is best to put the little pigs with her and leave them together. It is well not to interfere except when it is absolutely necessary."

Care of the Sow and Young.

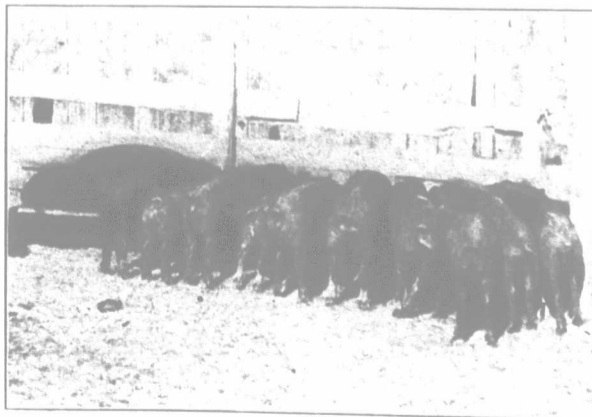
After farrowing, the sow should not be disturbed for several hours. When she requires food she will come to the trough for it. At first her ration should be very thin; in fact, little more than drink. A thin slop of middlings and water answers very well, but this could be improved by a small quantity of skim-milk. If the weather is cold the feed should be warmed slightly. Considerable care should be taken during the first few days not to over-feed. After three days the amount of feed may be gradually increased but a week to ten days should be taken to bring the sow to full feed. A good dam with a large litter



Guard Rail for Farrowing Pen.

requires liberal feeding after she is back to normal. Equal parts of finely-ground oats and middlings allowed to soak between feeds makes an excellent ration. Skim-milk added to this will, of course, improve it greatly. Roots and green feed are also desirable, but they must not be depended upon too much at this time.

When the little pigs are about three weeks old they will have commenced to sample the feed in their mother's trough. They should then be equipped with a creep, and an extra pen in which is a trough for their own exclusive use. Milk and finely-ground oats, or middlings will be relished by the young pigs. If the hulls are



A Thrifty Bunch of Shoats.

sifted from the oats the quality of the ration will be improved. Some very successful pig raisers make a practice of scattering whole oats in straw on a clean floor. The youngsters in sear-hung around for the kernels take exercise and the scheme seems to be very successful. Sometimes the sow refuses to let the pigs nurse. In such cases examine the mouth of each pig and if sharp teeth are present, break them off with a pair of small piners.

A sow with her litter of pigs should not be confined in a pen. Some of the little pigs are very likely to sicken and die with this treatment, owing to being too fat. Exercise is very essential for the young pigs.

Some Diseases to Which Pigs are Subject.

There are a number of diseases to which young pigs are subject. Rickets is one of them. This is an enlargement, bending and distortion of the bones and limbs, which is due to improper nutrition. Sanitary condition, providing adequate supplies of various feeds rich in all the requisites of a perfectly-nourished animal and providing plenty of mineral matter will avoid this trouble. Young pigs are sometimes subject to skin troubles or a form of eczema. Washing with a one per cent. solution of some coal-tar disinfectant and keeping the pigs clean will remedy this trouble. Young pigs which are fed heavily and are not given sufficient exercise are sometimes affected with a disease known as thumps which is caused by a disordered digestion. This disease may be contracted before the pigs are weaned and it is very often that the best pigs in the litter get sick first. The symptoms are contractions or spasms of the diaphragm, causing a jerking movement of the flank. The pigs become unthrifty and stunted. Forcing the pigs to take plenty of exercise and feeding them judiciously is the best preventative. Once the trouble is contracted, little can be done. If the young pigs are affected with diarrhoea, give a dessertspoonful of raw linseed oil; after eight to ten hours give a half dram of subnitrate of bismuth and three drops of laudanum in a teaspoonful of new milk every six or seven hours. If the animal is weak omit the oil. Pigs that are confined in close quarters that are not any too clean sometimes contract bronchitis. There is loss of appetite, coughing and sneezing, and in many cases the patients die. Fumigating by burning sulphur is one remedy. When pigs are around two months old they may become affected with what is known as infectious sore mouth. Ulcers form on the lips and gums and refuse to heal. In such cases the patient should be put in clean, well-ventilated quarters and the mouth washed with a solution of one ounce boric acid to a quart of water. Touching the ulcers with a pencil of nitrate of silver will aid in removing them.

Sometimes young pigs are affected with mange; the hair stands erect and thick scabs form at the roots of the hair on the neck and shoulder top and about the ears and face. Some of the coal-tar dips are recommended for this disease. It is important that the animals be kept wet with the solution until the scabs are soaked through. The pens must also be cleaned and disinfected. If the pigs are affected with worms, fast them for twelve hours and give from two to six tablespoonfuls, according to size, of a mixture of one part oil of turpentine in seven parts new milk. It may be necessary to repeat in ten days' time.

The above are a few of the diseases to which pigs are subject. Practically all of them can be avoided by judicious feeding, giving the pigs plenty of exercise and housing them in clean, well-ventilated quarters.

Weaning the Pigs.

If the pigs are thrifty they should be ready to wean at six weeks although some leave them with the sow until they are seven or eight weeks old. Male pigs which are not intended for breeding purposes should be castrated a week or ten days before they are weaned. The younger they are when this job is done the less the shock to the system. It is not a difficult operation and the wound heals in a short time. Should a pig be ruptured it will be necessary to put a few stitches in the wound after the testicle is removed in order to prevent the intestines escaping. To avoid complications when operating on a ruptured pig he should be held by the hind legs, head down, until the testicle is removed and stitches put in.

It is advisable to wean the pigs gradually. Turn the sow out into the yard for a few hours the first day and for a longer time the second. By turning her in with the pigs a time or two udder trouble will be avoided.

The pigs should be eating freely before they are weaned but care must be taken not to overfeed. The first month after weaning is a critical time. Some feeders have more or less difficulty getting the pigs to the one hundred pound mark but after that are able to make satisfactory gains. For this reason they prefer to buy shoats to fatten rather than raise them. Overfeeding causes more trouble than underfeeding. Heavy grains as corn and barley should be guarded against the first two or three months. There is nothing to equal a

mixture of good grain part of a milk is considerable young pigs they tasted skim-milk available so much. A pig can be fed have seen more skim milk. The next feeding may be reduced during the winter. For cheapest gain run of a paddock shelter so much erect a temporary pigs are liable to. The pens should a wallow occasion it is a filthy animal farm if given a is essential to t and pigs by freedom. It is important both before and important that they keep them through lack of exercise pigs. A little exercise prevent complications to doctor and a profitable. The feeds makes it that this spring pigs right and cheapest gains a

Regulation

On Thursday ing Order-in-Council the feeding of g the stock yards

1. (a) The live stock with slaughter is prohibited

(b) No live stock in a

(c) No bar above grade ext live stock in a

(d) The wa feed made in wh due to careless feeding, is hereby

(e) A copy shall be posted where feed is issued

2. No perso for milling purposes however, that v with other grain milling purposes provided it does wheat, may be poultry.

3. No perso the Canada Foo rye, Indian corn of feeding or dec

Clauses 4 and the penalties aris

Farnham

It may be sa sale held at Farn day, March 21, sales ever held household goods, with the noted Downs, and mar successful live-st Dominion. The



mixture of good shorts and finely ground oats, for the grain part of a ration, to start young pigs. While skim-milk is considered by some to be essential in starting young pigs there are many thrifty pigs that have never tasted skim-milk. However, if a dairy by-product is available so much the better, but don't feed too much. A pig can be given too much of a good thing and we have seen more than one put off its feet by too much skim milk. There should be a clean trough before the next feeding time comes around. The grain ration may be reduced considerably by feeding pulped mangels during the winter and throwing weeds or clover to the pigs during the summer if they are confined to a pen. For cheapest gains the growing pigs should be given the run of a paddock seeded to clover or rape. If there is shelter so much the better. It may be advisable to erect a temporary shelter for the summer months as the pigs are liable to get badly sunburned.

The pens should be kept clean. While a pig frequents a wallow occasionally it does not necessarily mean that it is a filthy animal. There is no cleaner animal about the farm if given a chance. Cleanliness of pens and yards is essential to thriftiness. Keep vermin from the pens and pigs by frequently applying disinfectant.

It is important that the sow be given due attention both before and after farrowing and it is equally important that the young pigs be so looked after as to keep them thrifty and growthy. Overfeeding and lack of exercise are the forerunners of many ailments in pigs. A little care at the proper time will oftentimes prevent complications setting in. A sick pig is difficult to doctor and a stunted pig is unsightly, as well as unprofitable. The need for meats and the high price of feeds makes it more important now than ever before that this spring's litters be well looked after. Start the pigs right and allow them a paddock to run in if the cheapest gains are desired.

Regulations Re Feeding Grain at Stock Yards.

On Thursday, the seventh day of March, the following Order-in-Council was passed at Ottawa regulating the feeding of grain to live stock held for slaughter in the stock yards of Canada.

1. (a) The feeding in stock yards of any kind of live stock within eight hours immediately preceding slaughter is prohibited.

(b) No wheat of any grade shall be used for feeding live stock in a stock yard.

(c) No barley above grade No. 3, and no oats above grade extra No. 1 feed shall be used for feeding live stock in a stock yard.

(d) The waste in a stock yard of any grain or any feed made in whole or in part from any grain product, due to carelessness of handling or feeding, or to over-feeding, is hereby prohibited.

(e) A copy of this Regulation and of Regulation 4 shall be posted up in every stock yard in each place where feed is issued or sold.

2. No person shall sell or purchase any wheat fit for milling purposes for the feeding of poultry, provided, however, that where wheat has been grown together with other grain and the wheat cannot be separated for milling purposes without undue cost, such mixture, provided it does not contain more than 25 per centum of wheat, may be sold or purchased for the feeding of poultry.

3. No person shall without a written permit from the Canada Food Board use any wheat, barley, oats, rye, Indian corn, buckwheat or peas, for the purpose of feeding or decoying migratory wild fowl.

Clauses 4 and 5 of this Order-in-Council deal with the penalties arising out of any violation of the Act.

Farnham Oxfords Make \$53 Average.

It may be said that, in many ways, the dispersal sale held at Farnham Farm, Arkell, Ontario, on Thursday, March 21, was one of the most noteworthy farm sales ever held in Ontario. The farm implements, household goods, work horses and cattle all sold along with the noted Farnham flock of pure-bred Oxford Downs, and marked the closing out of one of the most successful live-stock breeding institutions in the whole Dominion. The attendance was almost a record one,

and the prices realized in all divisions were unusually high and quite in keeping with the offerings throughout. The Oxfords numbered in all 17 yearling ewes, 11 two-year-old ewes, 6 three-year ewes, 6 four-year-old ewes, and 34 ewe lambs, making a total of 74 head sold, for which Messrs. Arkell received \$3,957, an average of \$53.47, altogether. The yearling ewes made an average of \$67.38; the two-year-old ewes, \$65.90; the three-year-old ewes, \$64.16; the four-year-olds, \$66.66, and the ewe lambs \$38.30. Quite a number sold locally, although the majority of the better stuff went to such breeders as E. Barbour & Sons, Hillsburg; Peter Arkell & Co., Teeswater; Adam Armstrong, Fergus, and J. Cockriel, of Homefield, Manitoba. The American buyers were Dan W. Hansley, Buell, Missouri; L. S. Kyle, La Chienne, Kansas, and H. E. Rodwieder, Goodwin, S. Dakota.

THE FARM.

Flax Production and Soil Fertility.

By DR. C. A. ZAVITZ, O. A. C.

The actual amount of fertilizing constituents taken from the soil by different crops is an important matter from the farmer's standpoint. To secure this information it is necessary to have a knowledge of both the yields and the chemical composition of the crops. Unfortunately, the statistics gleaned by both the Dominion and the Provincial Governments do not furnish sufficient data for these calculations. For instance, the Ontario Bureau of Industries has not collected information in regard to yields of seed and straw of flax or of straw of cereals. At the Agricultural College, however, accurate determinations are made from year to year of the yields of both grain and straw per acre of the different farm crops.

Flax, winter wheat, oats and barley have been grown under similar conditions in the experimental grounds at Guelph in each of the past twelve years. The varieties used for these determinations of the comparative exhaustiveness of soil fertility were Common flax, Dawson's Golden Chaff winter wheat, Banner oats and Mandscheuri barley. In each case the chaff was included with the straw. The flax was grown in duplicate plots each year with an average of 77 pounds of seed per acre, and the average returns, therefore, represent twenty-four tests in the twelve-year period.

For the chemical composition the figures used were obtained from the 1915 edition of "Feeds and Feeding" by Henry and Morrison with the exception of those of flax straw which are not given in that publication. For the chemical composition of the flax straw use has been made of the figures determined by Kennedy in his thesis prepared at the Ontario Agricultural College. The flax was obtained from the Field Husbandry Department, and it was analyzed in the Chemical Department of this institution. The following table gives the average annual yields for the twelve-year period and the amount of fertilizing constituents obtained through the sources previously indicated:

Varieties.	Yield Per Acre			Nitrogen N.		Phosphoric Acid P2O5		Potash K2O	
	Seed	Bushels and tons	Pounds	Per Cent.	Total in Crop (Lbs.)	Per Cent.	Total in Crop (Lbs.)	Per Cent.	Total in Crop (Lbs.)
Common Flax.....	Seed	18.3	1024	3.62	37.1	1.50	15.4	.95	9.7
	Straw	2.45	4900	.72	35.3	.31	15.2	1.02	50.00
Dawson's G. C. Winter Wheat.....	Seed	43.2	2590	1.87	48.4	.85	22.0	.52	13.5
	Straw	2.22	4440	.50	22.2	.13	5.8	.74	32.9
Banner oats.....	Seed	75.0	2550	1.98	50.5	.81	20.7	.56	14.3
	Straw	2.07	4140	.58	24.0	.21	8.7	1.50	62.1
Mandscheuri barley.....	Seed	63.4	3043	1.84	56.0	.85	25.9	.74	22.5
	Straw	1.98	3780	.56	21.2	.18	6.8	1.20	45.4

The yields of all four crops are considerably larger than the average yields of the Province. It should be clearly understood, however, that the experiments have been conducted under uniform conditions. The

crops were grown during the twelve years immediately previous to 1917. The land received a four years rotation during which three crops were removed from the soil. Farmyard manure was applied every four years at the rate of twenty tons (about twelve good sized loads) per acre. No commercial fertilizers were used with any of these crops throughout the period. If the yields here given were divided by two they would more closely correspond with the average yields of the Province.

The following summary gives in a more concise form the average amounts per acre of fertilizing constituents taken annually by the four crops and in accordance with the yields and the compositions given in the previous table:

Varieties.	Pounds Per Acre.		
	Nitrogen N.	Phosphoric Acid P2O5	Potash K2O
Common flax.....	72.4	30.6	59.7
Dawson's Golden Chaff winter wheat.....	70.6	27.8	46.4
Banner oats.....	74.5	29.4	76.4
Mandscheuri barley.....	77.2	32.7	67.9

Of the four individual crops, winter wheat took a less amount of each of the fertilizing constituents from the soil than of the others. Barley required the largest amount of nitrogen and phosphoric acid and oats the largest amount of potash. The comparative exhaustion of these crops on the soil is largely a matter of the disposal of the crop after it is grown. Both the grain and straw of oats and barley are principally consumed on the farm and much of the fertility is returned in manure. In the case of wheat, the grain is sold and the straw is largely retained. In the growing of flax, however, both the seed and the straw are frequently sold outright. The market value of these crops per acre, however, are usually the lowest for oats and barley and decidedly the highest for flax. It is interesting to note that the number of acres of flax in Ontario was approximately 4,000 in 1915, 5,200 in 1916, and 8,000 in 1917; and that the value of fibre per ton and of seed per bushel for the same period was as follows: 1915, \$400, \$1.60; 1916, \$600, \$3.00; and 1917, \$1,100, \$5.50. As there is a strong demand for both the fibre and the seed the probabilities are that the acreage of flax for 1918 will be still greater than that of the past year.

According to the Monthly Bulletin of Agricultural Statistics for the Dominion of Canada for February, 1918, the fibre yield of flax for Western Ontario for last year was 350 pounds per acre, valued at 55 cents per pound, and the yield of seed 9 bushels per acre, valued at \$5.50 per bushel. This would give a return from both the seed and the fibre of \$242 per acre.

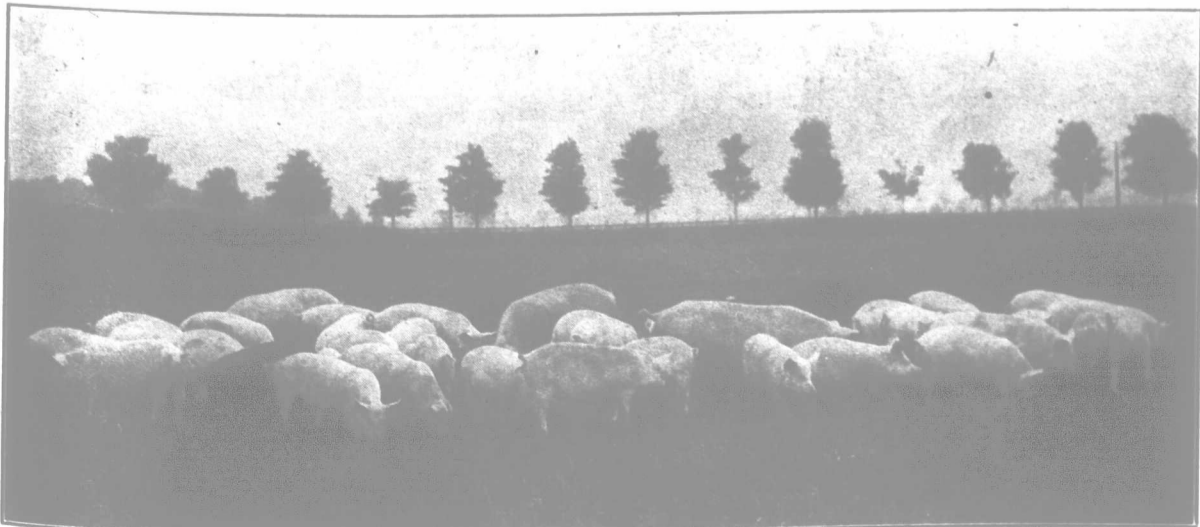
It is hoped that the results submitted in this short article may prove of service in giving information regarding the comparative exhaustiveness on the soil of flax in comparison with that of some of the principal cereal crops.

The Agent's Side of the Question.

EDITOR "THE FARMER'S ADVOCATE":

In your issue of March 21st I note under heading "Too Many Agents," "Farmer," of Lambton Co. complaining of the system used by companies in selling farm machinery to farmers, and I agree with Farmer in saying that seven farm machine agents are rather more than reasonable for an average local village, but feel safe in drawing my own conclusions as to the financial standing of at least half of them, unless the farmers have been educated in that section to create a sympathy for the farm machine agent different from what seems common custom in Eastern Ontario. In my experience as agent and noting the experience of others, I have failed to know a single machine agent accumulating enough riches to consider it safe to retire unless he had been interested in the handling of some other line of business other than farm machinery.

Although I am an agent now and have been for the past five years, I only went into the business in preference to farming because I was not able to farm and, having a liking for the handling of farm machinery, and might mention in commencing business (profiting by experience of others), took on other lines of goods from the start. As for pocketing good commissions I think if "Farmer" could experience an agent's position he would not be long in finding out he would be tempted a great many



The Results of Good Swine Husbandry.

more times, in order to make a deal, to take a smaller rather than larger commission than he should have. Now as for a remedy for this too-many-agent way of handling the farm machinery business, in my opinion farmers in general, heretofore, have been placing undue blame on the agent for the price they had to pay for their implements, and seem to still hold the idea that if they could only cut out this "good commission" they would then be able to purchase their machinery at a satisfactory price. This plan has been worked to some extent through the mail-order houses and, true, some small prices are secured, but in my mind, and I am satisfied

that a great many farmers are learning, the buying of a farm machine is not all that is connected with the transaction, and while he pays an agent a little more money he finds a great deal more satisfaction after delivery is made. Right here is a suggestion I would like to make in the way of companies appointing agents to be of most practical use to farmers. Instead of Government action being asked for, why not farmers, through their different organizations, appeal to the larger manufacturing companies to have them weed out rather than cut down their agents, and have each compelled by contract to carry a good stock on hand of repairs for

the different machines as the season passes and also a few completed machines, and in this way show the farmer that they are trying to help him rather than play the "shark" as at present so many seem to regard him. The plan I have suggested is in accordance with contract of at least one company at present, and I think if all companies were required to contract in this way with their agents it would be the means of lessening the number and, as "Farmer" says, give better returns for all concerned.
Dundas Co., Ont. MACHINE AGENT.

Automobiles, Farm Machinery and Farm Motors.

Avoid Gas Accidents.

When the bathing season opens it is not long until the papers begin to publish stories of drowning fatalities, and so when the weather becomes warm and automobiling reaches its height the press is called upon to record a great many accidents through carelessness in handling gasoline. Last year in a certain Western Ontario town a well-known professional man held a match over the gauge of his gasoline tank while fuel was being delivered to the intake. A great burst of flame damaged the back and top of the car and severely burned the careless match-holder. This autoist should have realized that it is in the vapor which comes from gasoline that the danger lurks. We can tell you another story of a man who in doing work in a small garage allowed his engine to operate for some little time without seeing that the ventilation of the building was adequate to take away the exhaust gases. He suffered the most severe headache and his family were greatly alarmed over the condition of his health. What he failed to realize was that a running engine should never be worked over in any confined space. The door of the garage should have been left wide open, or the windows thrown back, or a pipe attached to the exhaust and the burnt gases discharged in the open air. Carbon-monoxide gas comes from the exhaust of an internal combustion engine and soon poisons the air to such an extent that anyone in the immediate vicinity must inevitably become very ill. Perhaps you will believe all this when you remember that you have noticed many times that a pipe is always

connected to the exhaust of a gasoline engine and the fumes let out of the building. When carbon-monoxide is thrown into the air the atmosphere is not fit for human consumption. We cannot go further without also recording the story of the young chauffeur who cleaned his engine by spraying it with gasoline and, before wiping off the gasoline, started his motor. When the power plant backfired the vapors burst into flames. It was only by a miracle that the building in which the machine was being cleaned, and the machine itself, were saved from total destruction by fire. What this man should have done was to have cleaned his car in the open air at some place a considerable distance from any structure, and before starting the motor he should have made certain that all the gas had been thoroughly rubbed off.

There are a number of rules that everyone should follow in the handling of gasoline. In the first place it is well to remember that the fuel is safest when it is stored under ground. Do not carry the gas around in open vessels and do not under any circumstances bring open lights near it. When you go into a room where gasoline has been spilled do not judge conditions by the amount of odor present because, for some reason or other, the odor goes to the ground with the vapor itself, and the upper air, while it may not seem dangerous, is nevertheless charged with perils. Do not spill gasoline, and do not allow any to remain on the bottom of vessels. Cigarettes, cigars and pipes should be tabooed when you are in your own or someone else's garage. If a fire starts from gasoline do not fight it with water but instead use chemicals or sand. Water spreads the

fire because gasoline is of lighter gravity. Where at all possible use kerosene instead of gasoline for cleansing purposes as the former is much cheaper and not nearly so dangerous. We very frequently read of fires that have started from spontaneous combustion. If you trace these blazes back to their origin you will find in a great many instances that they have resulted from an accumulation of old rags, waste or other cotton and woollen materials that have in some way or other become associated with gasoline. Keep all such stuff in a metal box, as far as possible removed from danger points. You may not think that this spontaneous combustion is going to affect your own premises but you must not be neglectful of the facts in the case and they are these: spontaneous combustion occurs from circumstances that are not well known but always under conditions that are very similar. Clean up your garage at regular intervals. This course is the safest in the long run. If your garage is in a building that is hard to ventilate by means of doors and windows put a hollow column some place in the structure and leave an opening at the bottom as well as the top. This column will act as a chimney and carry away any gas or dangerous vapors that may develop.

We think it timely that this article should be written on the eve of the automobile season. Read it over carefully and make a good resolution to the effect that while it may seem smart and clever to trifle with gasoline that you will this summer follow the motto, "Safety First."

AUTO.

Adapting Gasoline Engines to Burn Coal Oil as Fuel.

By Prof. W. H. Day.

On heavy tractors in the West coal oil has been used as fuel for years, and with good success. In Ontario kerosene engines are coming in very rapidly but throughout the Province there are many thousands of engines designed for burning gasoline, and many owners have been turning over in their minds the possibility of adapting these to burn coal oil, among whom was the Department of Physics, at the Ontario Agricultural College.

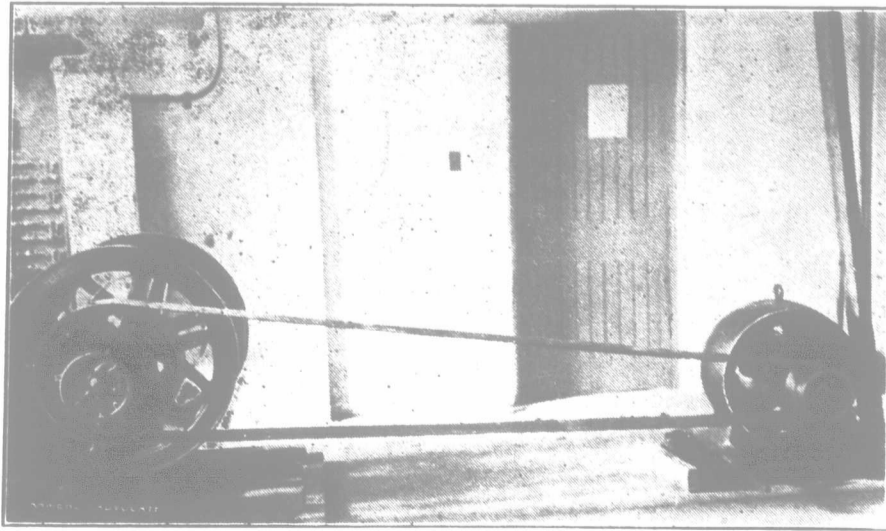
Our first endeavors to adapt the College ditching machine to use coal oil were made in 1913 when the price of gasoline ranged from 25 to 30 cents per gallon. We tried again in 1914. In both years our efforts were failures. In 1915 with the price of gasoline only 15 to 20 cents there was little to be gained by adopting coal oil. But when early in 1916 the price soared to 30 and even 35 cents the need for a cheaper fuel became urgent, not only for the College machine but for private machines as well, consequently, the work on coal oil or kerosene as it is coming to be called, was resumed. This time we succeeded so well that we now get at least as much work out of kerosene as out of the same quantity of gasoline.

It is an established fact that a gallon of kerosene contains from 8 to 10 per cent. more heat than a gallon of gasoline, yet in striving to adapt gasoline engines to use kerosene the general experience has been that it has required considerably more kerosene than gasoline to do the same amount of work, the difference being stated at all the way from 10 to 30 per cent.

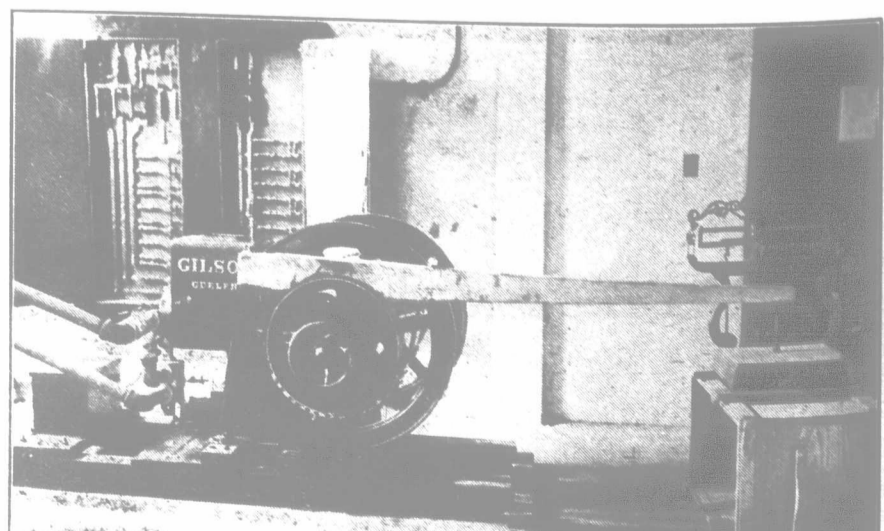
Now if kerosene contains the more heat, why this large difference in favor of gasoline in general practice? Crude oil as pumped from the wells is a mixture of

many compounds. When it is refined it produces gasoline, benzine, kerosene, etc. To refine the crude oil we must boil it. Here is where the different grades are produced. Most people are familiar with the term "boiling point" in reference to water. If a kettle of cold water be placed over a fire and the temperature of the water taken every few minutes it will be observed that the water becomes hotter and hotter until it begins to boil, after which the temperature remains constant no matter how intense the heat supplied to the kettle until all the water has "boiled away". This constant temperature is the "boiling point" of water. At sea level it is 212 degrees F. Now crude oil is different from water. Its boiling point is not constant. If a kettle of this liquid be heated as the water was, it will be found to boil even at 120 degrees or lower, but if it is kept at that temperature for a time it will cease to boil, although there is still much of the oil left in the kettle. Now if the fire be made hotter the oil will begin to boil again. If we were to condense the oil vapor at the two different temperatures into liquid we would find that the first was lighter gallon for gallon than the second. It is in just this way that the different products from crude petroleum are separated. Ether is driven off first, then gasoline, benzine, kerosene and distillate in order as named. Some idea of the temperature at which these are produced may be gained from the following: Heating a widely used brand of gasoline by means of an electric heater we noted the first fine bubbles of vapor form and rise to the surface when the temperature of the liquid

was 113 degrees although even before this the more volatile substances in the gasoline were vaporizing, as could be seen from drops which were formed by condensation on the inner surface of the glass vessel in which the boiling was being done. General violent boiling occurred at 176 degrees, and at the same time vapor began to come out of the spout of the vessel rapidly, like steam from the spout of a tea-kettle. This it will be noted is 36 degrees below the boiling point of water. As the lighter parts of the gasoline were driven off the boiling point kept on rising, reaching the high temperature of 302 degrees, or 90 degrees above the boiling point of water. Just what temperature would have been necessary to vaporize the heaviest portions of the gasoline we were not able to determine as boiling entirely dry might have injured the heater. Also heating a widely used brand of kerosene we noted the first condensation of the more volatile portions at 140 degrees, the first bubbles of vapor at 212 degrees, and general boiling with vapor rising from the spout at 356 degrees, which is 144 degrees hotter than boiling water. The highest temperature noted with the kerosene was 419 degrees. In our first tests we used a copper kettle and at this temperature the spout melted off—419 degrees is the melting point of half and half solder, i. e. solder composed of one-half lead and one-half tin. Once boiling began with either substance the temperature of the vapor above the liquid was found to be the same as that of the liquid itself, as in the case of boiling water. Hence we see that it requires only about half as high a temperature to boil gasoline, i. e., turn it into vapor, as it does to boil kerosene. We also see that this particular brand of gasoline boils



Photograph Showing Engine, Fly Wheels Only, and Dynamo as Used for Testing Fuels Under Steady Load.



Photograph Showing Engine on left, Scales on right, and Prony Brake for Testing Brake Horse-power of Engine.

readily at 36 degrees while with kerosene it reached until the water, and even remained unvaporized is not vaporized out with the point worth not to vaporize it is practically n to make the place the fuel up to boiling operations requ beginning at f kerosene nearly of water from where does all Did the reader the carburetor, how cold they surrounding air with frost? After it is vaporized and intake pip the air around completely vap carburetors, es tructed that p buretor is pr vaporizing the but if not, the that produced tion. With k different. The twice as great a gasoline, and a produce enough consequently th contain relative expelled as liq one reason wh requires more amount of wor for kerosene.

And this poi —To ensure fu must be supplie in it. There are 1. The ker 2. The car heated.

3. The air In 1913 we only, by drawi the cylinder. the makers of for heating the to be obtaining the air by dra cylinder head. facton. In 19 of the problem, of heat and th to provide heat As the College June the first a machine early beginning with machines were were paid for b machine started

Before ente may be of inte private machin 1915 and on 3- itself to compa but in both sea 300 gallons less

The other on the same fa up to Nov. 15 so that the lar proximately of year, the dept operated by the and during the rods per gallon starting when 4.723 rods per on gasoline the tained from 3,2 of kerosene. operated was th nevertheless so on account of t was moist, loos while in 1916, drouth during and the digging there is a parti to propel the n greater than th when the groun in the soil. A per day while t that they dug 1916 than in 19 in 1916 was 34 These figures s while the kero gasoline was be feel quite satis much work wit gasoline under

readily at 36 degrees below the boiling point of water while with kerosene the same stage of boiling was not reached until 144 degrees above the boiling point of water, and even at 419 degrees some of the kerosene remained unvaporized. Now any part of the fuel which is not vaporized in an engine does not burn but comes out with the exhaust unused and is wasted. Another point worth noting is the great amount of heat required to vaporize either gasoline or kerosene. On this there is practically no information available, so we have had to make the necessary determinations. In the first place the fuel must be raised from the air temperature up to boiling point, and then turned into vapor. Both operations require heat, the total amount for gasoline beginning at freezing point being 1 1/4 times and for kerosene nearly twice as much as to heat the same weight of water from freezing to boiling point. In an engine where does all this heat come from to vaporize the fuel? Did the reader ever place his hand on the upper part of the carburetor, or the intake pipe just above it, and note how cold they are—sometimes much colder than the surrounding air, sometimes in the winter even covered with frost? After the fuel is broken into fine globules part of it is vaporized by heat abstracted from the carburetor and intake pipe, and these in turn abstract heat from the air around them. But this is not sufficient to completely vaporize gasoline, and consequently many carburetors, especially those on "motors", are so constructed that part or all of the air drawn into the carburetor is preheated. This provides heat to aid in vaporizing the fuel, and for gasoline it may be sufficient, but if not, the heat of the warm cylinder together with that produced by compression completes the vaporization. With kerosene under ordinary conditions it is different. The amount of heat required for it is almost twice as great and the temperature twice as high as for gasoline, and all the sources of heat together do not produce enough to vaporize the kerosene completely, consequently the heavier parts of it, which by the way, contain relatively most heat are not vaporized, but are expelled as liquid and consequently wasted. That is one reason why general experience has found that it requires more kerosene than gasoline to do the same amount of work unless the engine is especially designed for kerosene.

And this points the way to the solution of the problem—To ensure fullest returns from kerosene sufficient heat must be supplied to vaporize even the heaviest compound in it. There are three ways in which heat may be applied:

1. The kerosene may be heated.
2. The carburetor or intake pipe, or both, may be heated.
3. The air may be heated.

In 1913 we devised a method of heating the air only, by drawing it from around the water jacket of the cylinder. It proved entirely inadequate. In 1914 the makers of the engine furnished us with a device for heating the air, and with which some were reported to be obtaining good results. It consisted in heating the air by drawing it through a specially constructed cylinder head. We were unable to make it give satisfaction. In 1916, having gained a better perspective of the problem, a better appreciation of the large amount of heat and the high temperature required, we decided to provide heat in all of the three ways above mentioned. As the College machine did not start until well on in June the first actual installation was made on a private machine early in May. It proved successful from the beginning without alteration and two other private machines were equipped with it. These equipments were paid for by the private owner. Before the College machine started, it too was equipped for kerosene.

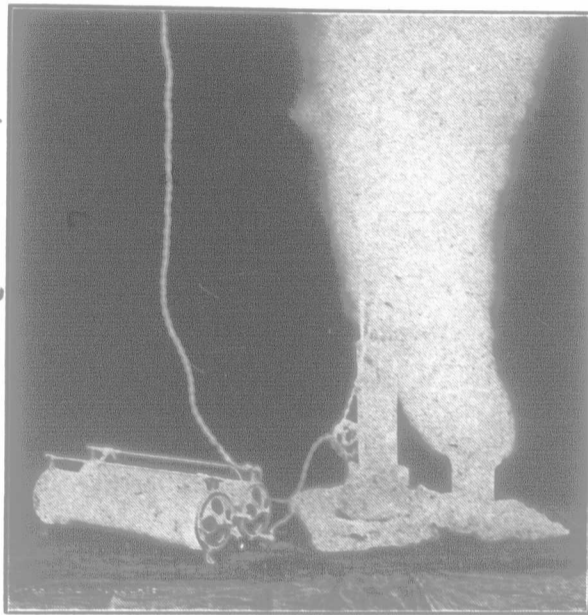
Before entering into the details of construction it may be of interest to note the results obtained. One private machine worked on trenching 4 1/2 feet deep in 1915 and on 3-foot trenching in 1916 so does not lend itself to comparison by the number of rods per gallon, but in both seasons it ran 10 hours per day, and it used 300 gallons less kerosene in 1916 than gasoline in 1915.

The other two during the first half of 1916 worked on the same farms as in 1915, and during the remainder up to Nov. 1st., they worked in the same locality, so that the land in which they were digging was approximately of the same nature as in the preceding year, the depth was the same, and the machines were operated by the same men. In 1915 they used gasoline and during the whole season dug on an average 4.83 rods per gallon. In 1916 they used kerosene, except for starting when the engines were cold, and averaged 4.723 rods per gallon, or about 2.22 per cent. less than on gasoline the year before. These averages were obtained from 3,200 gallons of gasoline and 2,400 gallons of kerosene. While the land in which the machines operated was the same during the two seasons, there was nevertheless some difference in the digging. In 1915, on account of the rains in July and August the ground was moist, loose and easy to dig during the entire season, while in 1916, because of the wet spring followed by drouth during the summer the ground became baked and the digging was consequently very hard. However, there is a partial offset to this, viz., the power required to propel the machine over the soft ground in 1915 was greater than that required for the same purpose in 1916, when the ground was hard and the wheels did not sink in the soil. A comparison of the number of rods dug per day while the machines were actually digging shows that they dug 1.3 per cent. less per day of 10 hours in 1916 than in 1915. And the time required for repairing in 1916 was 1/4 of one per cent. greater than in 1915. These figures show that the work was slightly harder while the kerosene was being burned than while the gasoline was being used. Under all the circumstances I feel quite satisfied that we were able to do at least as much work with kerosene as we would have done with gasoline under the same conditions. I asked the four

operators to state their opinions of kerosene from the practical side, and they all say that under ordinary loads they can see no difference, although under full load the engine does not seem to have quite as much "snap" in it when burning kerosene.

In part we used a grade of fuel cheaper than kerosene, and which seems cleaner about the engine and faster, and the engine starts better on it when partly cooled down. Some oil companies call it "Engine Naphtha" and others "Engine Fuel". About one-third of the 2,400 gallons was in reality naphtha or engine fuel.

The price of gasoline in 1916 delivered at the farms where the machines were working would have been about about 33 to 35 cents per gallon, kerosene cost 14 cents delivered and engine fuel 12 cents, so that the cost of fuel was reduced considerably below one-half by using the heavier oils instead of gasoline.



Photograph Showing Cloud of Coal Oil or Kerosene Vapor.

The kerosene is in the tall glass jar in the center, and in it is an electric heater. The fumes come out of the glass pipe seen in cloud, and are driven down into the breaker and then rise again.

On the College machine it was not feasible to make a comparison of value between work on gasoline in 1915 and on kerosene in 1916, because of lack of similarity in conditions. However, a number of tests were made trying out different fuels on the same plots in 1916, i. e. one ditch would be dug with gasoline and the next right beside it the same length and depth and in similar soil with kerosene or naphtha. In each test it took more gasoline than naphtha or kerosene to excavate 1 cubic yard.

These were hit-and-miss engines and our results with them are note-worthy, because it has been generally claimed by authorities that it was not practicable to adapt engines of this type to burn kerosene satisfactorily, the reason being that whenever an explosion is missed cold air is drawn into the cylinder, and this makes the latter so cool that when a charge of kerosene is later drawn in there is not sufficient heat in the cylinder to vaporize the kerosene. By our method, however, all the air is heated and, consequently, it does not cool the

cylinder during an idle stroke. There is perhaps one disadvantage in having the air heated, viz., that a full charge of hot air on account of the expansion when heated does not really contain as much oxygen as a charge of cold air would, and hence the charge in reality is not quite so large as if the air were cold, and hence the engine may not be able to develop quite as much horse power on a brake test. This objection only comes into effect when the engine is pulling full load, which, by the way, is very seldom.

It should be added that several manufacturing firms claim that in engines specially designed for kerosene they have no difficulty in obtaining fully as great power as obtained from gasoline in the best gasoline engines. Some claim to get somewhat more power from the former than the latter.

During 1917 we had some tests of fuels made by L. G. Heimpel, a fourth-year student, who for his fourth year thesis was investigating the relative value of oils used as fuel for internal combustion engines. The engine used was a stationary hit-and-miss 6 H. P. 6-inch bore, 12-inch stroke, running at 375 to 390 r. p. m. and originally designed for gasoline, but later adapted for kerosene along the same lines as followed with the ditching machine engines. When the gasoline tests were being made the kerosene equipment was disconnected and the engine run precisely as intended for gasoline, but for kerosene, naphtha and fuel oil the kerosene outfit was used. The first test consisted in putting a steady load on the engine, by means of electric generator, the voltage and current of which were maintained at a constant level, and running it for one hour first on one kind of fuel and then on another. In all cases the engine was first run until the water in the cooling jacket was 95 degrees, so that the engine was warmed up to the same extent in all cases. While warming up in each test, the carburetor was adjusted for the best possible results with that fuel. All tests were made twice over. The engine, of course, was not running at full load. The results were as follows:

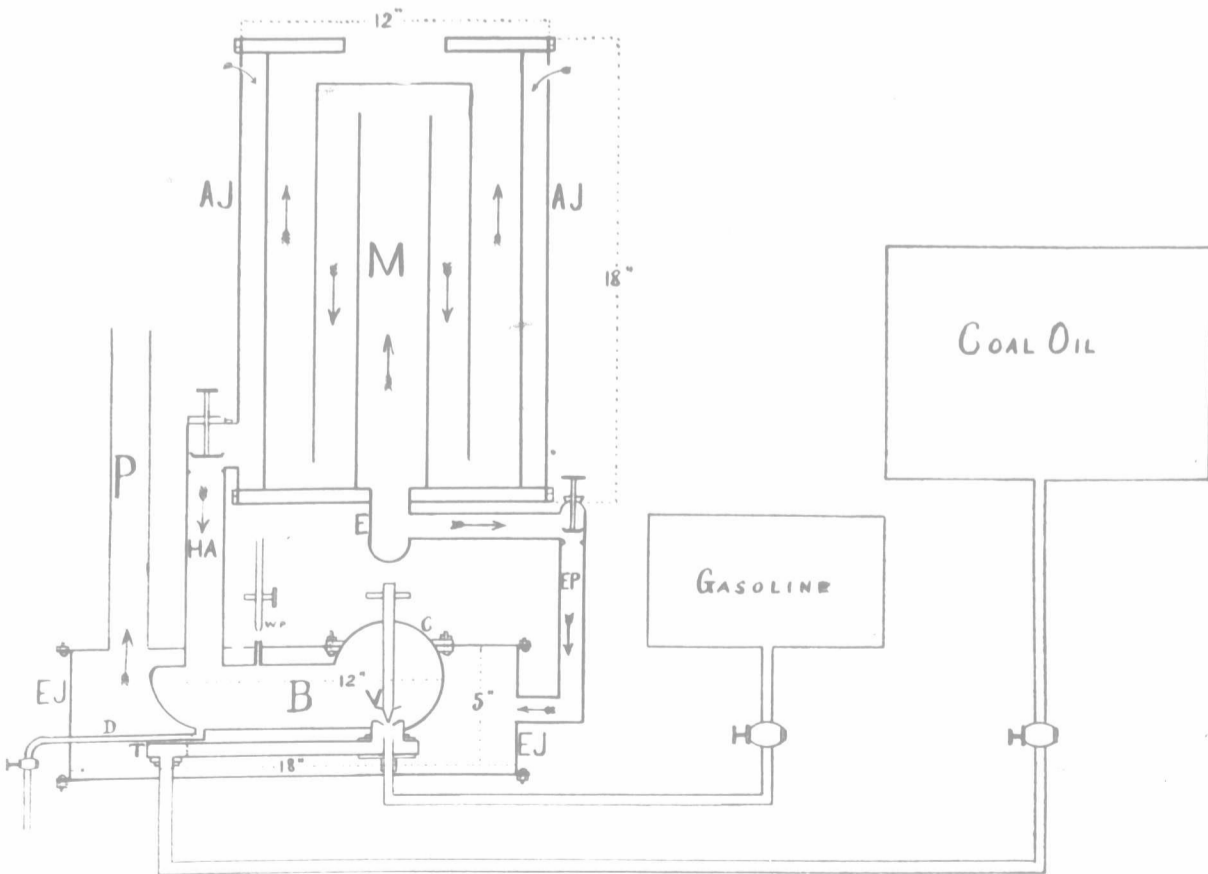
Fuel.	Quantity Used Per Hour. (Pints).
Gasoline, Brand No. 1.....	5.016
Gasoline, Brand No. 2.....	5.544
Kerosene.....	4.823
Gas Engine Naphtha.....	5.782
Gas Engine Fuel Oil.....	6.776

This shows a decided advantage of kerosene over the others, the nearest competitor requiring 4 per cent more than kerosene for absolutely the same output of work.

Perhaps someone, looking for loop-holes in our tests, will say the engine is in reality not a gasoline engine at all but a kerosene engine. Maybe so. Perhaps the designers in calculating the dimensions for a gasoline engine made a mistake and hit upon one well adapted for kerosene. A most happy mistake we shall all be inclined to admit. But whether due to a mistake or difference in the fuels, what is the odds, so long as we can take what is supposed to be an efficient gasoline engine and make it do more work per gallon on kerosene at 15 to 20 cents than on gasoline at 30 to 40 cents?

Another form of test was then made, viz., the brake-horse-power of the engine at full load. The average results were:

Fuel	Brake Horse Power
Gasoline.....	8.1067
Kerosene.....	8.0797
Naphtha.....	7.3505
Fuel Oil.....	7.0155



Section of Carburetor, Muffler, Gasoline and Coal Oil Tanks, Showing Device for Using Coal Oil as Fuel on Ditching Machine Engines.

This shows that under full load the gasoline gave a higher brake test than the kerosene, a result we have already anticipated from the fact that heated air, on account of expansion, contains less oxygen per cubic foot than the cold air used with the gasoline.

The method of adapting the ditching machine engines to use kerosene is shown in the accompanying sketch. M is the original muffler fastened to the engine by the exhaust pipe E, B is the original mixing bowl or chamber, C the original carburetor body which is bolted to the engine at the intake port, V is the original needle valve for admitting fuel to the mixer bowl, AJ is an air jacket which we had built around the original muffler, making a 1/2-inch air space to which air is admitted through holes at the top of the jacket, those farthest from the outlet being largest and those nearest being smallest. The total area of these holes is the same as the area of the hot air pipe HA. EJ is an exhaust jack built around the original mixer bowl and held in place by being bolted between the carburetor body and the mixer bowl. T is a small tank 10 in. x 4 in. x 1/2 in. through which the kerosene must pass on its way to the needle valve. To distribute the flow through the entire tank there is a partition across it near the inlet and perforated with very small holes. The exhaust jacket EJ is connected by a two-inch pipe EP to the exhaust pipe E so as to bring about half of the exhaust down around the mixer bowl and the heater tank T. The pipe P allows the exhaust to escape after heating the mixer bowl and tank. As the oil takes several minutes to pass through T it is thoroughly hot, even boiling if desired, before passing through V into the carburetor. In the hot mixer bowl it meets with hot air brought from the air jacket around the muffler, thus producing the best possible conditions for evaporation. A valve is placed in both the exhaust pipe and the air pipe so that the supply of both exhaust and air can be adjusted. The best valve for this purpose is a "quick opening" angle radiator valve. WP is a water pipe with pet cock through which water is admitted drop by drop to the mixer bowl where it mixes with the air and oil vapor. It is necessary to provide a drainage pipe D with pet cock leading from the mixer bowl, so that any excess water may be drained out, e. g., in case the water might be accidentally left running while the engine was stopped and flood the mixer bowl.

The reason generally given for having the water is as follows: Considerable carbon (soot) is produced in the cylinder when kerosene is used, and this if not removed collects in a hard layer on the spark plugs and in the cylinders, the former causing the engines to miss fire, and the latter, when the layer is thick enough to become red hot, firing the engines too soon, thereby producing a sort of pounding known as a "carbon knock" and reducing their power. To remove the carbon a little water is constantly admitted into the mixing chamber drop by drop. This keeps the carbon soft so that it is expelled with the exhaust. Two of the private engines in the above comparisons had to be cleaned only once during the entire season. The third had to be cleaned three times. Either too little water was admitted to remove the carbon or too little air or heat, or both, thereby producing more carbon than there should be. The College engine, although not in urgent need, was cleaned once when some repairs were being made.

If one were constructing an equipment after the plan outlined there are a few practical points that would help. The exhaust jacket and the tank T are both made of sheet iron. No soft solder should be used, for everything becomes so hot that the solder melts. The tank T should be acetylene welded, flange couplings being welded on to take the inlet and outlet pipes. The exhaust jacket may be either acetylene welded along the side, or rivetted, or fastened with short stove bolts placed close together. The ends of the exhaust jacket are made by cutting a piece of sheet iron one inch bigger

each way than required and then turning a 1/2-inch flange all round. By means of this flange the ends are bolted in by short stove bolts as shown in the cut. They should not be welded or rivetted in as it may sometime be necessary to take the mixer bowl out of the jacket. The hot air pipe HA must be securely fastened to the mixer bowl B. This may be done by drilling and tapping it, and screwing the pipe into the hole, or a flange coupling might be fastened to the top of the mixer bowl. The exhaust pipe EP is shown in the cut as being tapped into the right hand side of E and entering the exhaust jacket at the end. This was for convenience of illustration. As a matter of fact EP taps into the of E, comes straight out toward the reader, then down and enters the side of the exhaust jacket. The drainage pipe D in reality came out of the side of the jacket instead of the end. The air jacket was made open

Heating the oil, heating the air, heating the carburetor are all methods that have been employed before. We know of a number that heat the oil, either by coils in or around the muffler, or by a heater tank with exhaust passing around it. Some heat the carburetor with water from the water jacket, in which case the highest temperature possible for the oil is that of boiling water, viz., 212 degrees, that is seldom or never reached, for when the water boils the engine soon becomes overheated and must be stopped. For kerosene we should have about 350 degrees. And many heat the air or part of it. Some combine two sources of heat. In cases where it takes considerably more kerosene than gasoline for the same work we would judge from our experience that insufficient heat is being used.

Of interest in this connection would be the table of comparative data we have worked out for gasoline,

Properties of Gasoline, Engine Fuel and Kerosene (Fahrenheit).

Table with 8 columns: Fuel, Specific gravity at 36 degrees F., Average specific heat from freezing to general boiling point, Average quired per gram up to general boiling point. ((Calories)), Latent heat or heat required to turn 1 gram into vapor. (Calories), Notes on Boiling Point (First condensation on inside of flask, First bubbles of vapor, General boiling point, Highest boiling point noted).

on one side so as to slip down over the muffler, the edges at this open side being turned out, with holes drilled through them in places. When the jacket had been slipped down into position bolts were put through the holes and the two edges drawn tightly together as the nuts were screwed on.

When starting the engine with this equipment the tap in the kerosene pipe is closed and that in the gasoline pipe opened. This allows the gasoline to go direct to the needle valve without traversing the tank, and permits the kerosene to remain in the tank to become heated. In a few minutes these taps may be reversed, when the warm kerosene from the tank instantly comes into use.

To those not familiar with engines this equipment may seem complicated, but it is all quite simple to gasoline engine users. It cost about \$45 to make these alterations on each machine, and they paid for themselves in from three to four weeks running. Now that the method is fully worked out the price can be considerably reduced. Several operators of ditching machines have since made an equipment along these lines at practically no cost, \$5 or less. By some a coil of tubing has been substituted for the heater tank.

While the exact lay-out shown in the cut is for Buckeye Traction Ditcher engines yet by applying the principles set forth most engines can be adapted to use kerosene successfully. By means of a little ingenuity together with the assistance of a good tinsmith, the details can be modified to suit the construction of different engines. Where the gasoline is supplied by pump-feed the heater tank should, if possible, be placed between the constant level tank and the carburetor. If this cannot be done it may be feasible to heat the constant level tank itself, but this is somewhat wasteful of heat, as the excess oil which flows back to the main tank would carry some heat with it, and the full effect of the heating device would not be obtained until the fuel in the main tank was heated to the same temperature as that in the auxiliary. If neither of these suggestions suits any particular engine then the oil must be heated before it reaches the constant level tank. This is open to the same objection as the second method.

"engine fuel" and kerosene, in each case for a well known brand. The properties of water are given for comparison.

The second column shows the specific gravity or comparative weights of the liquids; it will be seen that in weight engine fuel is intermediate between gasoline and kerosene, and this applies to most of the other properties as well. The third column shows that these fuels are nearly twice as easy to heat as water. The fourth shows the number of calories of heat required to heat one gram of each from freezing to its general boiling point. The fifth gives the amount of heat required to turn one gram of the liquid at boiling point into vapor. This is about the same for the three, and in the case of engine fuel and kerosene almost as much as to heat each from freezing to its general boiling point. This shows why heating the fuel alone is not sufficient. An engine using 12 gallons of fuel per day burns about 73 to 80 grams per minute, depending on which fuel is being used. In the case of kerosene this requires heat at the same rate as would be necessary to heat a pint of water from freezing to boiling in seven minutes, or one-seventh of a pint in one minute. If sufficient heat is applied to vaporize the kerosene before entering the cylinder, and the heat of the cylinder and explosion is not sufficient to complete the vaporization during the "power stroke" then the unused portion is expelled as liquid globules and may be vaporized in the hot muffler. When this vapor reaches the air it produces the "blue smoke" so often seen with kerosene—it is not smoke in reality but the vapor condensing and forming a cloud as water vapor forms a cloud above the tea-kettle. When the kerosene is thoroughly vaporized and all burned there is very little smoke indeed. The last four columns deal with the boiling point, and show very plainly the reason for the great difference between the behavior of the different fuels. In this gasoline general boiling occurred 36 degrees below the boiling point of water, and so vaporization can be complete in cylinders as ordinarily cooled, especially if part or all of the air is heated. But with the other two fuels the vaporization requires a temperature so high that it is not available unless special heating devices are used.

Canada's Young Farmers and Future Leaders.

Can You Express Your Ideas?

Two men were in conversation and were discussing, among other things, what happened at the annual meeting of a local company in which they were interested. It appeared that the business had not been carried on in a very satisfactory manner during the past year, at least the methods employed did not meet with the approval of one of the men in question and he remarked to his friend, "I knew what I wanted to say, but couldn't say it." Now, isn't that the predicament in which many a man has found himself? Here was a man who wished to express himself before a meeting but felt that he could not do so intelligently, and yet he was successful in his business. This gentleman further stated, "I wish I had practiced speaking in public when a boy so that I would not labor under the handicap of failure to make myself understood. I hope my boys will not make the mistake I did, and I am doing all I can to give them an education." To become a good speaker a man must be a thinker and have something to say, and then he must know how to put his thoughts into sentences and present them so that his audience will grasp his ideas. This takes practice. The first time you stand before an audience your thoughts are likely to take wings and

leave you stranded. However, the second time will be easier and after you speak a few times you will become accustomed to hearing your own voice and will be able to express yourself quite freely. Too many boys permit their timidity to rule and allow opportunity after opportunity to speak in public slip by and by the time they reach young manhood they are at a disadvantage when it comes to expressing ideas in public. While boyhood is the best time to learn how to do things, one is never too old to learn and there are many who started platform work after they had reached their thirties and became very acceptable speakers. Not only had they good ideas, but they were able to present their thoughts in such a way that they held their audience. If the audience becomes restless there is usually something wrong with what the speaker is saying or in the way he is saying it.

If you have never made a speech, seize the next opportunity. It may be at your Farmers' Club, Young Farmers' meeting, chess, radio, singing, or literary meeting. It is not necessary to make a lengthy speech. A sentence or two may be all you have to say on the subject under discussion, but that sentence will help you as well as others. Many young men get their first experience on the platform at the county Short Course which they attend, and by making good in debates, are developed into very good speakers. You will regret it in later life as a boy or young man if you fail to practice putting your thoughts and ideas into words and sentences.

All in the State of Mind.

- If you think you are beaten, you are,
If you think you dare not, you don't;
If you'd like to win, but you think you can't,
It's almost a cinch you won't.
If you think you'll lose, you've lost,
For out in the world we find,
Success begins with a fellow's will,—
It's all in the state of mind.
Full many a race is lost,
Ere ever a step is run,
And many a coward fails,
Ere even his work's begun.
Think big and your deeds will grow,
Think small and you'll fall behind;
Think that you can, and you will,—
It's all in the state of mind.
If you think you're outclassed, you are,
You've got to think high to rise;
You've got to be sure of yourself before
You ever can win a prize.
Life's battles don't always go
To the stronger or faster man,
But soon or late the one who wins
Is the fellow who thinks he can.

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Southern

The South their sixth an Stables, Wood persel of an ex Ontario buyer equal to the b sale-ring in C, these got real considerable y good buying. Nine young bu strong herd he too low consi majority of th averaged \$73, brought \$170, \$142.95. The made an avera catalogued bro MacVicar Bro J. Begg & Son, Palmer, E. B. Howey. Follo and over, toge their purchas Lady Grey, W Mayflower 1th, Airmount Prim Springhill Gibs Helen of City Buttercup of F Kathleen of W Garlaugh Tny Olive, J. H. Cr Milkmaid 2nd, Airmount Bone Snowdrop of C Marjorie of C Aggie's Beauty Jean Armour of Garlaugh Han Hillhouse White Nanc, Terry, A Elgin Girl, D Johnny Cashier Rob Roy of Ma Dorothy of C Snowflake of C O. A. C. Captai Violet of Fairvi Peg, Geo. Abel, Miss Misty San Dairy Lass, R Garlaugh Lad Garlaugh Hop Hillhouse, Pearl Hillhouse White Robin Hood, J. Selwood Auld, C Woodlawn, Prid

THE DAIRY.

If the calf is a little "off its feed" give it a dose of oil and put a little lime-water in its milk. Lime-water tends to correct irregularities in the digestion.

If ringworm appears on your stock, moisten the scales with sweet oil to remove them and then apply tincture of iodine twice daily until cured. It will be necessary to disinfect the premises, as ringworm is contagious and may spread to healthy stock.

Use the curry-comb on the cows occasionally to help remove the old hair and clean the skin. If the pores of the skin are clogged with dirt the cows will not do as well as if she were kept clean. To get the best results the cow must be kept clean as well as fed properly.

Have you commenced weighing the milk, at each milking, of those cows that freshened recently? It may take a few minutes but it will give an idea of what each cow is doing, and in the end will be time well spent. No dairyman can really afford not to keep milk records.

Even when the rush of spring work is on time should be taken to properly look after the young stock. Feeding cold milk when the calves are not used to it or allowing their pen to become filthy may be the forerunner of trouble that will be hard to overcome. It won't pay to neglect the stock.

Up to the 31st of December, 1917, 1,091 Ayrshire cows and heifers qualified in the R. O. P. with an average of 8,790 lbs. of milk. Three hundred and twenty-three of the mature cows gave a yearly average of 10,285 lbs. of milk and 415.30 lbs. of fat. Four hundred and forty-one two-year-olds averaged 7,647 lbs. of milk with an average test of 4.08.

Between February 7 and March 20 there were 21 Ayrshire cows and heifers that qualified in the R. O. P. test. Maid of Orkney leads the mature class with 14,013 lbs. of milk and 539 lbs. of fat. Beauty of Craigielea was first in the four-year-old class, giving 10,196 lbs. of 4.47 per cent. milk. The three-year-old class was headed by Terrace Bank Fanny with a record of 8,417 lbs. milk and 339 lbs. fat. Queen of Spots was first of the two-year-olds. She gave 9,545 lbs. of milk and 415 lbs. of fat. Her test was 4.32.

Southern Counties Ayrshire Sale.

The Southern Counties Ayrshire Breeders' Club held their sixth annual consignment sale at Rudd's Sale Stables, Woodstock, on Wednesday, March 27, and dispersed of an even 50 head, all of which went to Western Ontario buyers. In the offering were lots that were equal to the best that have passed through any Ayrshire sale-ring in Canada in the year, and the purchasers of these got real value in every investment. There was considerable young stuff sold that was exceptionally good buying. This applies to both male and female. Nine young bulls, including a number that would make strong herd headers, only averaged \$88.88, which was far too low considering the quality and breeding of the majority of them. Eight heifer calves under one year averaged \$73. The two yearling heifers catalogued brought \$170, and the 9 two-year-old heifers averaged \$142.95. The 22 cows three years old and upward, made an average of \$196.15. Five young calves not catalogued brought \$150. Among the consigners were MacVicar Bros., John A. Morrison, E. B. Stansell, J. Begg & Son, J. L. Stansell, F. H. Harris, E. Burpee Palmer, E. B. Palmer & Son, R. J. A. Smith, and C. M. Howey. Following is a list of the animals selling for \$100 and over, together with the names and addresses of their purchasers:

Lady Grey, W. F. Beirnes, Beachville	\$190
Mayflower 4th, J. H. Crowthers, Tillsonburg	175
Airmount Primrose, R. R. Dodds, Guelph	155
Springhill Gibson Girl, A. E. Sadler, Harrietsville	100
Helen of City View, Dr. Sinclair, Sault Ste. Marie	180
Buttercup of Fernbrook 4th, R. R. Dodds, Guelph	200
Kathleen of Walnut Lodge, W. F. Beirnes	170
Garlaugh Tiny, A. E. Sadler	150
Olive, J. H. Crowthers	110
Milkmaid 2nd, R. R. Dodds	215
Airmount Boneya, R. R. Dodds	305
Snowdrop of City View, J. Hyatt, Tillsonburg	125
Marjorie of City View, J. H. Crowther	135
Aggie's Beauty, W. H. Hunter, Grimsby	285
Jean Armour of Fairfield 2nd, R. R. Dodds	210
Garlaugh Hannah, W. F. Beirnes	180
Hillhouse White Rose, A. E. Sadler	135
Nancy Terry, W. H. Hunter	230
Elgin Girl, D. A. Ashworth, Granton	190
Johnny Cashier of Lone Maple, R. R. Dodds	105
Rob Roy of Mapledale, S. A. Saunders, Petrolia	125
Dorothy of City View, W. H. Hunter	245
Snowflake of City View, A. W. Walton, Innerkip	195
O. A. C. Captain's Rosy, A. E. Sadler	120
Violet of Fairview, W. H. Hunter	300
Peg, Geo. Abel, Mitchell	255
Miss Mists Sam, W. E. Robertson, Woodstock	110
Dairy Lass, R. R. Dodds	135
Garlaugh Lady, Wm. Scull, Jordan	210
Garlaugh Hope, E. W. Walton	115
Hillhouse Pearl, J. H. Crowther	160
Hillhouse White Polly, Geo. Apel	110
Robin Hood, J. M. McVicar, Belmont	140
Selwood Violet 2nd, J. E. Wilson, Woodstock	105
Woodlawn Pride 2nd, J. H. Crowthers	220

Hill-Crest Holsteins Make \$750 Average.

Friday, March 28, the day of the great Hill Crest dispersion at Toronto, was a red letter day for Canadian Holstein breeders. For weeks past every prominent breeder of "Black and Whites," from Victoria in the West to Halifax in the East, has been anxiously waiting for the results of the event which then, had every promise of breaking all records of the breed's past sales, and, therefore setting up a new average for the Holstein cow in Canada. Of Mr. Brethen, and the Hill Crest herd, much was expected, and from the list of prices given below it will be seen that the expected happened. Thirty-four Hill Crest selections or the entire Hill-Crest offering sold for the splendid figure of \$25,508, an average of \$750.23. Of these, thirteen were under 12 months of age, seven were yearlings and six others were under three years of age, and had the half dozen or more young calves been sold with their dams the general average would, without doubt, have been considerably over the thousand dollar mark. The drafts from "Avondale," and the North Star herds, also made splendid averages. Thirteen lots from the former herd brought \$6,235, an average of \$479.40 all through, while the latter was only a very little below with a \$460 average. Listing the offerings from all three herds passing through the sale-ring, the total receipts were \$34,539, making a general average of \$655.39 for the 53 head sold. Nineteen cows, three years old and upwards, averaged \$1,087.63; eight two-year-old heifers averaged \$373.57; nine one-year-old heifers averaged \$266.65; six heifer calves averaged \$637.50. Seven bull calves averaged \$377.15, and three bulls over one year \$381.20. There were ten females in the offering that ran well into the four figures, the highest price for the day being \$4,400, which was paid by A. C. Hardy, of Avondale Farm, Brockville, for the four-year-old cow Hill-Crest King Pontiac Rauwerd. This heifer is a 34.04-lb. daughter of King Pontiac Artis Canada and Mr. Brethen's famous 29,000-lb. "Rauwerd." Next in order came Hill-Crest May Echo, a five-year-old 30-lb. daughter of May Echo Champion,



Wade Toole

Newly Appointed Professor of Animal Husbandry at the Ontario Agricultural College.

which went to Jno. A. Bell, Jr., of Pittsburg, Penn. The same breeder also took Hill-Crest May Echo Sylvia Rauwerd, a six-months daughter of Champion Echo Sylvia Pontiac and "Rauwerd" at \$2,900 with only himself and Mr. Hardy bidding. Of the nine head purchased by Mr. Bell, six were above one thousand dollars, and the average for the nine was \$1,372.22. Other purchasers of cows selling at \$1,000 or over were Phillip McConnel, Norwood; Jno Willoughby, Smith's Falls, and W. C. Stevens, Phillipsville, all of Ontario. The Hill-Crest herd sire, Hill-Crest Ormsby De Kol, which was the sire of many of the young things in this offering, was knocked down to the \$1,000 bid of Lemon & Son, of Lynden, Ont., but was resold, going back again to Mr. Brethen. Auctioneer W. Almas did the selling, and results in detail follow:

Hill-Crest Holsteins.

Hill-Crest King Pontiac Rauwerd, A. C. Hardy Brockville	\$4,400
Hill-Crest May Echo Sylvia Rauwerd, Jno. A. Bell, Jr., Pittsburg, Penn.	2,900
Hill-Crest Pontiac Jewel, W. C. Stevens, Phillipsburg	230
Hill-Crest Ormsby Sadie Belle, Hospital for Insane, Hamilton	275
Hill-Crest May Echo Belle, W. R. Cummings, Cummings's Bridge	650
Hill-Crest Sadie May, J. A. Campbell, Brantford	525
Hill-Crest May Pontiac, W. C. Stevens	1,050
Hill-Crest Sadie Ormsby, A. C. Hardy	275
Hill-Crest Rauwerd Sadie, A. C. Hardy	300
Hill-Crest Sadie Ormsby, Jno. A. Bell, Jr.	1,100

Hill-Crest Pontiac Sadie, Jno. A. Bell, Jr.	1,400
Hill-Crest Vale De Kol Ormsby 2nd, W. F. Elliott, Unionville	100
Hill-Crest Vale De Kol, Ormsby, O. A. C., Guelph	200
Hill-Crest Vale De Kol, Jno. A. Bell, Jr.	500
Hill-Crest Pontiac Vale, Jno. A. Bell, Jr.	1,500
Hill-Crest Lucy Ormsby, Wm. Robb, St. George	200
Hill-Crest Rauwerd Lassie, John C. Brown, Stratford	225
Hill-Crest Hengerveld Lassie, Philip McConnel, Norwood	1,175
Hill-Crest Pietertje Ormsby, Philip McConnel	100
Hill-Crest Pontiac Echo Pietertje, B. B. M. Carthy, Thamesford	290
Hill-Crest Ormsby Pietertje, J. S. Logan, Hamilton	175
Hill-Crest Rauwerd Jewel, J. E. T. Nixon, Coburg	225
Hill-Crest May Echo Countess, Jno. A. Bell, Jr.	3,000
Hill-Crest Pontiac Susie, John Willoughby, Smith's Falls	1,125
Hill-Crest Susie De Kol, A. W. Churchill, Gananoque	525
Hill-Crest Rauwerd Susie, R. H. Davies, Oak Ridges	275
Rauwerd Mercena Posch, Thos. Leslie, Norval	380
De Kol Mutual Count, Jas. Seymour, Ida	400
Hill-Crest Sadie Prince, A. J. Reesor, Markham	210
Rauwerd Echo Pontiac, Arch. Muir, Scarborough	325
King Pontiac Rauwerd, Gresbach Bros., Collingwood	575
Hill-Crest May Echo King, S. H. Concybere, Listowel	550
King Pontiac Susie, W. J. Bailey, Jarvis	500
King Rauwerd Susie, R. M. Mitchell, Belleville	100

The Avondale Offering.

Blossom Hengerveld, Leslie Greer, Puslinch	175
Blossom Pietje Hengerveld, L. Davidson, Meadowvale	275
Princess Stella Segis 2nd, W. C. Stevens, Phillipsville	385
Avondale Pietje Pauline, W. H. Cherry, Hagersville	775
Pietje Clothilde Pontiac, Jno. A. Bell, Jr	1,000
Woodcrest Clyde Pietje, Gordon S. Gooderham, Clarkson	375
Alice Tensen's Canary, Jno. A. Bell, Jr	850
Yearling heifer, Jno. A. Bell, Jr	500
Pietje Inka Pontiac, W. F. Elliott	525
Pontiac Sarah Pietje, Jno. A. Bell, Jr	450
Clyde De Kol Bessie, Hospital for Insane, Hamilton	200
Avondale Belle Clyde, Thos. E. Stone, Creemore	175
Calf (male), Wm. Robb	550

North Star Farm Offering.

Retta Maida Korndyke, J. Seymour	550
North Star Johanna Segis, A. L. McMukin, Norval	325
Johanna Sylvia, L. Wilson & Son, Hamilton	225
Sir Waldorf Korndyke	575
Sir Maida Waldorf Korndyke, J. Seymour	625

A Tribute to the Cow.

The following paragraphs are credited to Col. F. M. Woods, of Lincoln, Nebraska. They are from an address delivered at the opening of a sale held some time ago, and show how dependent the human race is upon the dairy cow:

"Grand and noble brute, of all man's animal friends she is the greatest. To her we owe the most. Examine into all the channels of trade into which she enters and note the result should she be blotted out. A Sunday stillness would pervade the great stock yards of our large cities and grass would grow in the streets. One-half the freight trains that plow the continent from ocean to ocean would sidetrack, for there would be nothing for them to do. Fifty per cent. of the employees would draw no pay on Saturday night, and our tables would be bare of the greatest luxuries with which they are now loaded. The great plains of the west that the cow has made to blossom like the rose would revert to the Indians from whence they came, and millions of prosperous homes would be destroyed.

"None other like the cow. There is not a thing from nose to tail but what is utilized for the use of man. We use her horns to comb our hair, her skin is on our feet and horses' backs. Her hair keeps the plaster on our walls, her hoof makes glue and her tail makes soap. She gives us our cream, our milk, our butter and cheese and her flesh is the meat of all nations. Her blood is used to make our sugar white, her bones when ground make valuable fertilizer, and even the contents of her paunch she has herself put through the first chemical process for the manufacture of the best quality of white board paper, and now it has been discovered that that paper can be made into the best false teeth. Oh, you who would abuse the cow, I wish that I could for once take from your table as you are about to sit down to the evening meal all that the cow has placed thereon. I'd take up the cup of milk sitting by the baby's chair. I'd take the cream biscuit, the custard pie, the cream for coffee, the butter, the cheese, the smoking roast of beef or steak or the sweet corned plate of juicy meat. In fact, I'd leave you to make your meal upon Irish potatoes, beet pickles and toothpicks.

"No other animal works for man both day and night; by day she gathers food and when we are asleep at night she brings it back to re chew and manufacture into all the things of which I speak. She has gone with man from Plymouth Rock to the setting sun. It

was her sons that drew the prairie schooner for the sturdy pioneer, as inch by inch they fought to prove that Westward the Star of Empire takes its way. And the old cow grazed along behind and when the day's march was done she came and gave the milk to fill the mother's breast to feed the suckling babe that was perchance to become the future ruler of his country.

"Who says that what we are to a great extent we do not owe to man's best friend, the cow? Treat her kindly, gently, for without her—words fail me to describe.

"It was the cow that made it possible for man to change the great American desert into a land of happy and prosperous homes. When she came the buffalo disappeared, the Indian tepee gave way to the church, school-house and home, and where once the wild wolves howled to-day children prattle, grass grows, flowers bloom and birds sing."

HORTICULTURE.

Important Fruit Conference Held at Ottawa.

On March 26 and 27 a small number of fruit growers, representing the different Provinces of Canada, met at Ottawa in what might be called the fifth Dominion Fruit Conference. The deliberations were exceedingly business-like and harmonious in character. It is only natural that representatives from so many provinces and districts would entertain different views in regard to certain matters, and some questions might even be contentious, but the spirit of the whole conference was one of compromise. Important matters which have only excited long and animated discussions at past conferences were settled with dispatch and by unanimous votes on the part of the convention. The business of the conference was to decide on recommendations which might assist the Fruit Branch in drafting legislation. The Fruit Commissioner, D. Johnson, presided at all sessions, and in the end expressed himself as being greatly pleased with the spirit of compromise and harmony which prevailed and the results achieved.

Those attending the conference as official delegates from the various provinces were—British Columbia: C. E. Barnes, Walhachin; J. E. Reekie, Kelowna; G. A. Chick, Kelowna; Prof. F. M. Clement, Vancouver. Prairie Markets: L. E. Mutton, Regina. Ontario: R. W. Grierson, Oshawa; W. F. W. Fisher, Burlington; F. A. J. Sheppard, St. Catharines; Dr. A. J. Grant, Thedford; S. H. Rittenhouse, Jordan Station; P. W. Hodgetts, Toronto. Quebec: Prof. T. G. Bunting, Macdonald College; Peter Reid, Chateauguay Basin. New Brunswick: A. G. Turney, Fredericton. Nova Scotia: F. H. Johnston, Bridgetown; F. W. Bishop, Paradise; Stanley Banks, Waterville; M. K. Ellis, Port Williams. Prince Edward Island: A. E. Dewar, Charlottetown. In addition to these mentioned there were present H. C. Airth and E. Trask, both of British Columbia; Frank Carpenter, Grimsby, and J. R. Hastings, Winona; A. E. McMahon, Grimsby, N. S.; Prof. W. T. Macoun, Dominion Horticulturist, Ottawa, and several chief inspectors, including Messrs. Carey, Steele, Clark, Vroom, Baxter and others. Manufacturers of fruit packages were also present and took part in the deliberations or discussion.

The provisional program of the conference contained the following items: 1, uniform apple barrel; 2, uniform apple box for domestic use; 3, uniform apple crate; 4, standard six and eleven-quart basket; 5, standard bushel basket; 6, uniform peach, pear and prune box, and four-basket crate; 7, proper filling of packages to be made compulsory; 8, over-facing to be more clearly defined; 9, marking of open packages; 10, No. 2 grade; 11, No. 3 grade; 12, more explicit definition of culls; 13, inspector's authority to reduce grade of packages when fruit is found packed in violation of the Act; 14, shipping of immature fruit in open packages to constitute a violation of the Act; 15, repacking of fruit; 16, heaped leno covers; 17, berry hallocks; 18, the berry crate; 19, the re-use of packages.

It should be remembered that the conclusions arrived at and the resolutions carried at this conference do not for the present, alter the Inspection and Sales Act. The Commissioner, however, will be influenced by the opinions expressed when he is asked to draft legislation or suggest amendments to the present Act. Uniformity and standardization were aimed at in all the discussions and recommendations, and fruit growers cannot fail to benefit by the adoption of such standard packages and proposed legislation as were suggested at the fifth Dominion Fruit Conference.

Standard Barrel and Other Containers.

Some of the best work accomplished at the conference was the adoption of a standard apple barrel and standard boxes for different kinds of fruit. For many years controversy has centred round the apple barrel. Nova Scotia has clung to the minimum size containing ninety-six quarts, while Ontario has continued to use a barrel with thirty inch staves and containing from eight to sixteen quarts more than the Nova Scotia package. Since exportation to the Old Country market has ceased, the growers in Nova Scotia have sought to establish a trade in the Eastern States, but the size of their barrel has met with objection in that it is smaller than the standard barrel in use across the line. New York would permit its entrance but the State of Massachusetts seemed much opposed. Manning Ellis, in behalf of the Eastern delegates, expressed the opinion that Canada should adopt a barrel having definite dimensions, and suggested the United States standard barrel which is now being launched into universal use

throughout the Union. Eben James, Trenton, representing the Coopers' Association, said that barrel stock in Ontario, particularly the staves, was seconds left over after the manufacture of sugar and flour barrels. These were thirty-inch staves, and if a shorter stave were adopted it would necessitate the expense of cutting down to the required length. It was, however, brought out in discussion that this would entail only a moderate charge, not amounting perhaps to over one cent a barrel. The Ontario growers considered that it would be a considerable concession on behalf of Ontario to give up their barrel, but in order to arrive at some standard for the Dominion, they comprised with the delegates from the Maritime Provinces and adopted the United States standard barrel, which contains one hundred quarts and has the following dimensions: Head diameter, 17 $\frac{1}{8}$ inches; stave, 28 $\frac{1}{2}$ inches; circumference at bulge, 64 inches; contents, 7,056 cubic inches. It was further suggested that stock now on hand be used during the season of 1918-19, but after June 1, 1918, all staves cut for apple barrels shall conform with the suggested size. The Commissioner assured the delegates that any legislation enacted would make no unreasonable demands or entail heavy losses on coopers or manufacturers.

In order to overcome confusion arising out of the different sized boxes now on the market, the conference decided that the American or Washington apple box, measuring 18 by 11 $\frac{1}{2}$ by 10 $\frac{1}{2}$ inches inside measurement, be adopted as the standard for Canada, and for exporting to such countries as have no legal requirements of their own, and that when exporting to countries which have legal requirements permission be given to use the box required by the law of that country.

In regard to the apple crate, it was suggested and carried that a standard apple crate be adopted in Canada which shall conform in dimensions and size to the standard apple box, with slats at least three-quarters of an inch apart.

Boxes of three different depths were adopted for peaches. The dimensions of these were as follows:

18 x 11 $\frac{1}{2}$ x 4 $\frac{1}{2}$ inches.
18 x 11 $\frac{1}{2}$ x 4 inches.
18 x 11 $\frac{1}{2}$ x 3 $\frac{1}{2}$ inches.

The different depths were suggested in order to accommodate different sizes in peaches.

The legal Canadian pear box accepted will be 18 x 11 $\frac{1}{2}$ x 7 $\frac{3}{4}$ inches inside measurement. Exporters are permitted to use whatever box they deem advisable or most acceptable to foreign trade. Some discussion arose here as to the use of apple boxes for packing pears. This package is found suitable on many occasions, but the majority favored uniformity and it was thought that individuals could easily cut down the end of the apple box to make it conform with the standard for pears.

The legal Canadian prune box adopted will be 18 x 11 $\frac{1}{2}$ x 3 $\frac{1}{2}$ inches, inside measurement, or the same as the small peach box.

It will be noticed that the standard boxes adopted throughout are the same length and width, making the tops and bottoms interchangeable. Any variation is in the depth, a feature which indicates the aim of the conference in standardizing packages and making them uniform.

The four-basket crate, used chiefly in British Columbia, was accepted with the following measurements for the baskets: 7 $\frac{1}{2}$ x 7 $\frac{1}{2}$ inches at the top; 6 $\frac{1}{2}$ x 6 $\frac{1}{2}$ inches at the bottom; 3 $\frac{3}{4}$ inches deep.

The matter in regard to berry hallocks was cleared up to a certain extent, the result being that the four-fifths and two-fifths quart remain, and the full pint is to be used largely in British Columbia for strawberries.

The convention also adopted the American bushel basket as our standard for such a package. Its capacity is 2,150 $\frac{1}{2}$ cubic inches.

Climax Baskets.

For years fruit growers have had their troubles with the climax basket. There have been several different sizes and great variations. The veneer has often been of poor quality; they have been badly made in some cases, and owing to the variation in sizes covers have not fitted. The shippers, too, have experienced difficulty in loading them in cars when they did not conform to any one standard. The fruit growers of the Niagara Peninsula have given this considerable attention, and J. R. Hastings, as Chairman of the Basket Committee, introduced the subject and piloted it through the conference. It was decided to standardize an eleven and a six-quart basket. The depth of the eleven-quart basket to be 6 inches, with veneer cut fourteen to the inch (minimum). The bottom is to be three-eighths inch thick (minimum); the top band to be three-quarters inch in width, cut twelve to the inch (minimum); the bottom band to be one-half inch width, cut fourteen to the inch (minimum). The handle is to be twenty-five and a half inches long and one and one-eighth inches wide, cut seven to the inch (minimum). The basket is to be of such length and width as to hold eleven quarts, as nearly as practicable. Other specifications were named in connection with the manufacture of this basket, and details stated in regard to nails, tacks, etc. Representatives of the Basket Manufacturers submitted that the change in sizes would necessitate a great loss to them in obtaining new machinery, as the old machinery could not be used. It was stated that about \$30,000 is invested in machinery in the Province of Ontario for the manufacture of baskets. It was brought out in discussion, however, that the machinery installed might be remodelled without any unreasonable expense. Considerable time was spent in discussion between the manufacturers and the growers, but it was finally proven that the producers and shippers of fruit had just cause

for complaint, and that something should be done to standardize and improve the baskets they are obliged to use. Complete, specifications and details for the standard six and eleven-quart baskets were adopted.

Amendments to the Inspection and Sale Act.

The conference suggested important changes in the Inspection and Sale Act. These amendments are explained in the following resolutions adopted:

1. That the fancy grade be eliminated.
2. That the No. 1 grade be allowed to remain as at present.
3. That the No. 2 be defined "unless such fruit includes no culls, sound, of nearly medium size, and some color for the variety, and not less than 85 per cent. free from scab, worm holes, bruises and other defects, and properly packed."
4. That a domestic grade be embodied in the Act and defined as follows: "Unless such fruit includes no culls, sound, of not less than nearly medium size for the variety, 80 per cent. free from worm holes, but may be slightly affected with scab and other minor defects, and properly packed."
5. That grade No. 3 be defined to include no culls, and be properly packed, and that the definition of the word "culls" be left with the Department for proper wording.

In the discussion arising out of these resolutions, it was brought out that the fancy grade is not used commercially. It is an exhibition pack and of little economic importance.

The definition of a No. 1 grade appeared satisfactory, but the Fruit Branch was desirous of making the definition of a No. 2 more exact, so as to overcome the uncertainty in the clause which mentions those things which may cause material waste. It will be noticed also that the grade will be improved by five per cent. less of scab, worm holes, bruises and other defects. The domestic grade was created to handle a class of apples which are not quite good enough for No. 1 or No. 2, but are still too good for No. 3, such as large, well-colored apples somewhat scabby, or large apples without color. These apples will most likely be intended for immediate consumption. The No. 3 grade, which in reality will be No. 4, was left on the schedule to satisfy the Nova Scotia growers who have built up a large trade in this particular commodity.

Marking and Filling Open Packages.

It was the opinion of the conference that the name and address of the packer should be on every open package, and a resolution was carried to this effect. Co-operative associations may deem it advisable, however, to stamp their name on the package and hold the grower responsible through some mark of identification.

A suggestion was made that the proper filling of packages be made compulsory, and that the inspectors be empowered to inspect packages at point of destination and weigh or test them. The growers themselves favored inspection, but stated very clearly that this should be at point of shipment. They could not stand responsible for the fruit after it had passed through the channels of distribution. In this connection the following resolution was carried, "That all packages of fruit offered for sale shall be well and properly filled at point of shipment, and in cases where inspectors find evidence of under-filling they shall have the right to weigh or measure contents of package at point of shipment in order to determine whether said package had been well and properly filled."

Shipping Immature Fruit.

At fruit growers' conventions in the past the practice of shipping immature fruit has been eloquently condemned. The effect of this practice is to destroy a market which might otherwise be staple and strong. A committee of the Fruit Growers' Conference was asked to consider this question. Their report in the form of the following resolutions was adopted. They recommended that: 1, Immature fruit shall not be marketed except where the demand is legitimate; 2, no fruit that is so materially diseased, wormy, or otherwise depreciated so as to be unfitted for consumption shall be marketed; 3, that the Department be requested to draft regulations whereby the various points and facts embodied in these principles can be put into effect; 4, immature fruit is defined as including all fruit that is unsuitable for consumption because of a lack of those desirable and necessary qualities of a culinary or dessert product.

Inspectors May Reduce Grades.

Formerly inspectors had authority to inspect fruit shipments and to brand them "falsely marked" when they did not measure up to the requirements of the Act. It was recommended and carried by the convention that wherever closed packages intended for shipment are found falsely marked, the inspector at point of shipment may efface the improper grade mark and replace the proper one. The inspector should also be empowered to hold the car until the fruit has been marked properly.

Repacking and Re-using Packages.

Considerable trouble has arisen in the past through dealers and wholesalers repacking fruit. It was recommended in this regard that packages re-packed for sale shall be marked as such and shall bear the name and address of re-packer, and further, no grade mark shall be altered except by the authority of a Dominion inspector.

It was also recommended that in cases where packages are re-used all original markings must be obliterated. This conference had no power to deal with anything but fruit, but it was felt very strongly that grades should be established for potatoes and onions. A resolution embodying this principle was adopted and will be presented to the Government.

Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending March 27.

Receipts and Market Tops.

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

CATTLE							CALVES						
Receipts			Top Price Good Steers (1,000-1,200)				Receipts			Top Price Good Calves			
Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Week Ending	Same Week	Week Ending	Same Week	Week Ending	Week Ending	
Mar. 27	1917	Mar. 21	Mar. 27	1917	Mar. 21	Mar. 27	1917	Mar. 21	Mar. 27	1917	Mar. 21	Mar. 27	
Toronto (Union Stock Yards)	4,970	5,518	6,081	\$12.25	\$12.50	\$12.50	1,336	1,612	1,181	\$17.00	\$14.00	\$17.25	
Montreal (Pt. St. Charles)	896	737	563	13.00	12.25	12.50	1,640	1,602	1,324	14.00	13.00	15.00	
Montreal (East End)	376	606	332	13.00	12.25	12.50	1,640	968	1,405	14.00	13.00	15.00	
Winnipeg	2,076	3,295	2,350	12.50	10.00	12.75	34	49	16.50	11.50	16.00		
Calgary	1,316	160	1,803	12.15	9.00	11.35							

HOGS							SHEEP						
Receipts			Top Price Selects				Receipts			Top Price Good Lambs			
Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Week Ending	Same Week	Week Ending	Same Week	Week Ending	Week Ending	
Mar. 27	1917	Mar. 21	Mar. 27	1917	Mar. 21	Mar. 27	1917	Mar. 21	Mar. 27	1917	Mar. 21	Mar. 27	
Toronto (Union Stock Yards)	4,836	11,247	7,811	\$21.00	\$16.40	\$20.75	190	219	367	\$20.85	\$18.25	\$20.70	
Montreal (Pt. St. Charles)	1,411	1,186	1,155	21.75	16.50	21.25	36	33	17	17.00	14.25	17.00	
Montreal (East End)	700	540	666	21.75	16.50	21.25	76	36	24	17.00	14.25	17.00	
Winnipeg	7,632	8,100	6,524	20.25	15.50	20.00	90	4	23	20.00	20.00	20.00	
Calgary	1,510	1,500	3,462	19.25	14.25	19.25	220	23	17.25	13.00			

NOTE.—The total of the graded stock at each stock yard will vary from 1 per cent. to 5 per cent. of the actual receipts offered for sale. Any variation from this will be noted.

Market Comments.

Toronto (Union Stock Yards)

Cattle receipts for the week were again heavy and buyers assumed an indifferent attitude on Monday, on which day they endeavoured to make their purchases at a reduction of from 25 to 40 cents per hundred below last week's prices. As a result trading was very inactive until noon, by which time few of the thirty-five hundred cattle in the pens had been weighed up. During the afternoon however, more activity developed at slight reductions in prices, and before the close of the market most of the cattle had moved out at figures about 25 cents below those prevailing at the close of the previous week. Only eight hundred cattle were on sale on each of the following days and trading was a trifle more active with prices a shade higher than those ruling on Monday. The quality of the stock offered was on the whole fairly high, many choice cattle being weighed up. Only a limited number of heavy steers were offered. Of these, one choice load from Galt, Ontario, which averaged around twelve hundred pounds per head, sold on Monday at \$12.65 per hundred, two head of about the same weight at \$13.00, while other good sales were made from \$12.10 to \$12.25. For steers weighing from one thousand to twelve hundred pounds, \$12.15 was paid on Tuesday for twelve head weighing eleven hundred and fifty pounds each, while a straight load of about similar weight and quality sold on the same day at \$12.10; other sales were made at \$12.00 but most of the sales in these weights were made between \$11.00 and \$11.75. A few choice baby beef cattle sold during the week from \$12.00 to \$13.60 per hundred; ranging in weight from six hundred to nine hundred pounds. Straight load of cattle weighing under one thousand pounds sold as high as \$11.60, while most of the good stuff moved from \$10.75 to \$11.50, and medium from \$9.75 to \$10.25. Following the decline in other grades of cattle, cows and bulls also sold lower. Two choice cows changed hands on Monday at \$12.75, a few others sold during the week at \$11.00, but most of the choice cows sold from \$10.00 to \$10.50, those of good quality from \$9.00 to \$9.75, and common to medium from \$7.00 to \$8.75. Most of the cows on sale were of rather inferior quality. One good bull sold at \$10.75 per hundred, while \$9.00 to \$10.00 covered the largest percentage of the sales of those of good quality; common bulls realized from \$7.75 to \$8.75. Stockers and feeders continued in good demand and several hundred were shipped out to country points. One choice load of feeders weighing eleven hundred and fifty pounds each was bought for grazing at \$11.75 per hundred, while other sales were made from \$9.75 to \$10.50 for good feeders, and for good stockers from \$8.75 to \$9.50; medium quality stockers sold from \$8.00 to \$8.50, while grass cows realized from \$7.50 to \$8.25. Calves are moving freely at the present time and with thirteen hundred on sale during the week, prices in this department were steady. Choice veal sold from \$16.00 to \$17.00 and medium from \$13.00 to \$15.00.

The lamb market was steady and

TORONTO (Union Stock Yards)					MONTREAL (Pt. St. Charles)				
CLASSIFICATION	No.	Avg. Price	Price Range Bulk Sales	Top Price	No.	Avg. Price	Price Range Bulk Sales	Top Price	
STEERS heavy finished	70	\$12.25	\$11.75-\$12.50	\$12.75	9	\$13.50	\$13.50-	\$14.00	
STEERS good	653	11.58	11.00-11.75	12.25	158	12.60	12.00-13.00	13.00	
STEERS 1,000-1,200 common	20	10.46	10.00-11.00	11.00	6	11.25	11.10-11.75	11.75	
STEERS 700-1,000 good	1,349	11.20	10.75-11.50	11.75	112	11.90	11.25-12.00	12.25	
STEERS 700-1,000 common	411	10.10	9.50-10.50	10.75	99	10.30	9.75-11.00	11.00	
HEIFERS good	774	11.35	11.00-11.75	12.00	44	12.00	11.75-12.50	12.75	
HEIFERS fair	353	10.15	9.75-10.50	10.50	41	10.50	10.25-11.25	11.25	
HEIFERS common	93	9.25	8.75-9.50	9.50	25	9.50	8.75-9.75	9.75	
COWS good	250	9.75	9.50-10.25	11.00	81	10.75	10.25-12.50	12.75	
COWS common	556	8.00	7.50-8.50	8.75	66	9.00	8.50-9.50	9.50	
BULLS good	75	9.92	9.00-10.50	10.75	40	11.25	10.50-12.25	13.25	
BULLS common	52	8.25	7.75-8.75	9.50	40	10.10	8.50-10.25	10.25	
CANNERS & CUTTERS	163	6.43	6.00-6.75	6.75	50	6.50	5.50-6.75	7.00	
OXEN					6				
CALVES veal	1,331	15.00	14.00-16.50	17.00	1,267	10.25	8.50-13.00	14.00	
CALVES grass	5	8.00	7.00-9.00	9.00					
STOCKERS good	19	9.13	8.75-9.50	9.50					
STOCKERS fair	25	8.50	8.00-8.75	9.00					
FEEDERS good	60	10.31	10.00-10.75	10.75					
FEEDERS fair	47	9.75	9.50-10.00	10.00					
HOGS selects	4,596	20.87	20.75-21.00	21.00	1,212	21.50	21.25-21.75	21.75	
HOGS heavies	38	20.81	20.75-21.00	21.00	2				
HOGS (fed and watered) lights	97	19.39	18.75-20.00	20.00	62	20.75	20.00-21.00	21.00	
HOGS (fed and watered) sows	95	19.32	18.75-20.00	20.00	23	19.25	18.50-19.50	20.00	
HOGS (fed and watered) stags	10	61.75	16.75-	17.00	7				
LAMBS good	159	20.25	19.50-20.85	20.85	20	17.00	17.00-	17.00	
LAMBS common	11	17.87	16.00-19.00	19.00					
SHEEP heavy	9	12.34	11.00-13.00	13.00					
SHEEP light	5	14.00	12.00-15.00	15.00	14	13.50	13.50-	13.50	
SHEEP common	6	9.00	7.00-10.00	10.00					

active, and a new level in prices was reached when a half deck of lambs from the farm of E. C. Drury, Barrie, Ontario, sold at \$20.85 per hundred; other sales were made from \$19.50 to \$20.50. Sheep were steady at last week's quotations. Hog receipts continue very light and prices remain firm. Selects sold on Monday and Tuesday at \$20.75 to \$21.00 per hundred, fed and watered. On Wednesday with only sixteen hundred on sale none were reported as being weighed up below \$21.00, and the market closed steady at this level on Wednesday. Of the disposition from the yards for the week ending March 21st, Canadian packing houses bought 625 calves, 107 bulls, 40 heavy steers, 4,602 butcher cattle, 8,944 hogs and 224 sheep and lambs. Local butchers purchased 460 calves, 393 butcher cattle, 11 hogs, and 152 sheep and lambs. Canadian shipments were made up of 47 calves, 48 milch cows, 149 butcher cattle, 228 stockers and 44 feeders. There were no shipments made to United States points during the week. The total receipts from January 1st to March 21st inclusive, were 52,977 cattle, 7,289 calves, 93,051 hogs and 9,746 sheep and lambs; compared to receipts of 50,264 butcher cattle, and 8,118 calves, 114,558 hogs and 10,284

sheep, received during the corresponding period of 1917. **Montreal.** Receipts of butcher cattle were twelve hundred and seventy two head, compared to eight hundred and ninety five the previous week and thirteen hundred and forty three during the same period of 1917. On account of the strong inquiry for extra good quality beef for the Easter trade, a considerable number of choice butcher cattle were shipped in and were sold at high prices on what proved to be the best quality market of the present year. Receipts however, were comparatively light, and despite the absence of outside buyers, the majority of the sales of good quality stock were made at prices from 25 to 50 cents higher than those prevailing at the close of the previous week's market. Local butchers and local packers purchased the entire offering, a considerable proportion of which was on sale on Saturday in order to get an early killing for the holiday trade. The market opened strong with active trading and accumulated further strength on Monday on account of the light receipts over the week end and the good quality of the greater part of the offerings. Receipts continued light during the remainder of the week, and the

market closed steady at the advanced prices for all stock of good quality, while inferior grades were slower in tone following the decline at other markets. On Saturday two baby beef heifers which weighed about seven hundred and seventy five pounds each, sold at \$13.50 per hundred, while two extra good quality bulls realized \$13.00. On Monday some exceptionally good sales were made, among which was that of four steers averaging thirteen hundred and twenty-five pounds which dressed from fifty eight to sixty per cent. of their live weight, at \$13.50 per hundred, one choice steer which tipped the scales at fourteen hundred and ninety pounds at \$14.00, fourteen averaging eleven hundred and fifty at \$13.00, fourteen steers weighing from one thousand to twelve hundred pounds at \$12.50, while mixed lots sold from \$11.25 to \$12.75. Of steers weighing less than one thousand pounds, eleven head averaging eight hundred and eighty four pounds realized \$10.25 per hundred and twenty two averaging nine hundred pounds, \$11.25. Most of the heifers sold in mixed lots with the steers, although a number of separate sales were made at prices equally high with those paid for other classes. Cows of good weight and quality made exceptionally strong sales, noticeable among

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which were these of three animals averaging thirteen hundred and sixty-five pounds at \$12.50 per hundred, and twelve averaging nine hundred and sixty pounds at \$12.75; these of fair quality sold mostly from \$8.50 to \$9.50, while canners and cutters were slightly stronger from \$5.50 to \$6.75 per hundred. Butcher bulls of good quality commanded high prices, a number of sales being made from \$11.00 to \$12.00 and better. Receipts of calves continue to increase while the average quality continues to decrease and as a consequence a further cut in price was made, the majority selling about \$1.00 per hundred below the closing quotations of the previous week. A few milk-fed calves of good weight sold at \$13.00 per hundred and one at \$14.00 while most of the offering sold around \$10.00.

Only a handful of sheep and lambs were offered; lambs sold from \$16.50 to \$17.00 per hundred and sheep at \$13.50. The market for hogs was active throughout the week at \$21.25 per hundred, fed and watered, for short run selects, and \$21.50 for long run selects, while a number of sales were made at \$21.75, which price was being quoted at the close of the market. Receipts were light while there was a noticeable improvement in weight and quality during the week.

Pt. St. CHARLES.—Of the disposition from the Yards for the week ending March 21st, Canadian packing houses and local butchers purchased 1,324 calves, 46 canners and cutters, 32 bulls, 445 butcher cattle, 1,140 hogs and 17 sheep and lambs. Canadian shipments were made up of 40 milch cows. There were no shipments made to United States points during the week.

The total receipts from January 1st to March 21st inclusive, were 7,243 cattle, 5,512 calves, 14,353 hogs and 5,004 sheep compared to 8,944 cattle, 6,277 calves, 15,423 hogs and 4,573 sheep, received during the corresponding period of 1917.

EAST END.—Of the disposition from the Yards for the week ending March 21st, Canadian packing houses and local butchers purchased 1,306 calves, 300 butcher cattle, 666 hogs and 24 sheep and lambs. Canadian shipments were made up of 97 calves, and 32 butcher cattle. There were no shipments made to United States points during the week.

The total receipts from January 1st to March 21st inclusive, were 7,557 cattle, 4,573 calves, 9,171 hogs and 4,692 sheep; compared to 10,310 cattle, 6,026 calves, 12,306 hogs and 5,825 sheep, received during the corresponding period of 1917.

Buffalo.

Cattle.—Cattle trade was good all last week, shipping steers of any class selling full steady with the week before, which week showed very high prices. Government contracts for beef included Buffalo packers and the result was a good demand for anything in the steer line. Other classes of cattle sold full steady. Best shipping steers ranged from \$13 to \$13.75, a load of big, tough Canadian steers selling at \$12.50. Best handy steers ranged from \$12.75 to \$13. Trade has been active on any class of fat cattle. Bulls of all classes sold steady, demand was strong for anything in the stocker and feeder line, while a good, firm market was had on dairy cows. Prospects are for a continued very satisfactory

market, especially on steers. Sellers generally are looking for a strong price throughout the spring and summer. Receipts for the week totaled 3,875 head as against 2,875 for the previous week and as against 4,000 head for the corresponding week last year. Quotations:

Shipping Steers—Natives—Choice to prime, \$13.15 to \$14; fair to good, \$12.50 to \$12.90; plain, \$11.50 to \$12; very coarse and common, \$10.75 to \$11.

Shipping Steers—Canadians—Best, \$12 to \$12.50; fair to good, \$11.25 to \$11.75 common and plain, \$10.00 to \$11.00.

Butchering Steers.—Choice heavy, \$12.50 to \$12.75; fair to good, \$11.50 to \$11.75; best handy, \$12.00 to \$12.50; fair to good, \$11.25 to \$11.75; light and common, \$10.00 to \$10.50; yearlings, choice to prime, \$12.50 to \$13.00; fair to good, \$11.75 to \$12.00.

Cows and Heifers—Best heavy heifers, \$11.00 to \$12.00; good butchering heifers, \$10.50 to \$10.75; fair butchering heifers, \$9.50 to \$10.25; common, \$7.50 to \$8.25; very fancy fat cows, \$11.00 to \$12.25; best heavy fat cows, \$10.00 to \$10.75; good butchering cows, \$9.00 to \$9.50; medium to fair, \$7.50 to \$8.50; cutters, \$6.50 to \$6.75; canners, \$5.00 to \$6.00.

Bulls.—Best heavy, \$10.00 to \$10.75; good butchering, \$9.00 to \$9.50.

Stockers and Feeders.—Best feeders, \$10.00 to \$10.50; common to fair, \$8.50 to \$9.25; best stockers, \$8.50 to \$9.00; fair to good, \$7.00 to \$8.00; common, \$6.00 to \$6.50.

Milchers and Springers.—Good to best, (small lots) \$90 to \$120.00; in car loads, \$80.00 to \$100.00.

Hogs.—Prices the first four days of last week held up to a pretty high level and the following day, Friday, values showed a heavy decline. Monday a few decks of light hogs sold up to \$19.00, bulk moved at \$18.90, heavy mixed hogs sold up to \$18.75 and no heavies to speak of had to go below \$18.40. Pigs were active, selling from \$18.25 to \$18.50. Tuesday the market was a little easier, Wednesday's trade was strong to a nickel higher and Thursday's market on all grades, except pigs, which sold at \$18.00, was about like Monday. Friday values were 40 to 50 cents lower. Top for light hogs was \$18.60, bull sold at \$18.50, heavies ranged on down to \$18.00 and buyers got pigs as low as \$17.50. Roughs the fore part of the week sold around \$16.50 and Friday they ranged from \$16.00 to \$16.25. Stags went from \$14.00 down. For the week receipts were 21,100 head, as compared with 23,474 head for the week before and 22,000 head for the same week a year ago.

Sheep and Lambs.—Last week started with best wool lambs selling up to \$19.40 but the bulk had to go at \$19.25. Cull lambs went from \$18.00 down and top for clipped lambs was \$16.35. Tuesday and Wednesday top was \$19.30, Thursday one load reached \$19.50 and Friday the bulk sold at \$19.50 but the quality was not very good. Cull lambs the latter part of the week brought up to \$18.50. Sheep and yearlings were scarce and they ruled steady all week. Yearlings reached \$17.25, wethers were quoted from \$14.50 to \$14.75 and ewes from \$14.00 down. Receipts for the week were 15,300 head, as against 13,621 head for the week previous and 13,300 head for the corresponding week a year ago.

Calves.—On the opening day of the week, under very heavy receipts, prices showed a bad break but before the week was out the decline was fully regained. Monday top vealssold generally at \$19.50. Tuesday the bull landed at \$18.50, Wednesday's range on the best was from \$19 to \$20.00, Thursday none sold above \$19.50, and Friday the majority reached \$21.00. Cull grades were steady all week, selling from \$16.50 down. Last week's receipts totaled 5,300 head, being against 3,791 head for the week before and 4,400 head for the same week a year ago.

Chicago.

Cattle.—Beeves, \$9.60 to \$14.65; stockers and feeders, \$8.40 to \$11.60; cows and heifers, \$6.30 to \$12; calves, \$10.50 to \$16.00.

Hogs.—Light, \$16.80 to \$17.50; mixed, \$16.40 to \$17.45; heavy, \$15.60 to \$17; rough, \$15.60 to \$15.90; pigs, \$12.50 to \$16.50.

Sheep.—Native, \$11.75 to \$17. Lambs, native, \$15.25 to \$19.50.

Cheese Markets.

Montreal, finest westerns, 24¢; finest easterns, 21¢; New York, specials, 24¢; average run, 23¢, to 24¢.

Open A Housekeeping Account



with The Merchants Bank, and pay all bills by cheque. By depositing a regular sum in a Savings Account, you know exactly how much is spent on the different branches of housekeeping.

When you settle by cheque, you avoid all disputes as to payment, as the cancelled cheques are receipts and prove the payments. This business-like method of home finance often prevents paying the same bill twice. Savings Accounts may be opened in sums from \$1 up, on which interest is allowed.

THE MERCHANTS BANK

Head Office: Montreal, OF CANADA. Established 1864.

with its 102 Branches in Ontario, 32 Branches in Quebec, 19 Branches in Manitoba, 21 Branches in Saskatchewan, 53 Branches in Alberta, and 8 Branches in British Columbia serves Rural Canada most effectively.

WRITE OR CALL AT NEAREST BRANCH.

Toronto Produce.

Live stock receipts at the Union Stock Yards, West Toronto on Monday, April 1 consisted of 116 cars, 2,165 cattle, 334 calves, 1,396 hogs, and 41 sheep and lambs. Butchers' steers and heifers and cows, 15 cents to 25 cents higher. Bulls steady; stockers and feeders strong; milkers and springers slow. Sheep and lambs strong. Good calves steady; common calves, slow and lower. Hogs \$21.25, fed and watered.

Breadstuffs.

Wheat.—Ontario (basis in store Montreal) No. 2 winter, per car lot, \$2.22. Manitoba wheat (in store, Fort William, including 2½¢ tax)—No. 1 northern, \$2.23½; No. 2 northern, \$2.20½; No. 3 northern, \$2.17½; No. 4 wheat, \$2.10½.

Oats.—Manitoba (in store, Fort William)—No. 2 C. W., 95¼¢; No. 3 C. W., 91¼¢; extra No. 1 feed, 90¼¢; No. 1 feed, 89¼¢.

Oats.—Ontario, No. 2 white, 93¢, to 94¢; No. 3 white, 92¢, to 93¢, (according to freights outside.)

Peas (according to freights outside)—No. 2, \$3.60 to \$3.70.

Barley (according to freights outside)—malting, \$1.76 to \$1.78.

Buckwheat (according to freights outside)—\$1.83 to \$1.85.

Rye (according to freights outside)—No. 2, \$2.55.

American corn (U. S. A. War Board prohibit importation).

Flour.—Ontario (Montreal prompt shipment, new bags). War quality, \$10.70, Montreal, \$10.70, Toronto; Manitoba flour, (Toronto, new bags) war quality, \$11.10.

Hay and Millfeed.

Hay.—No. 1, per ton, car lots, \$17 to \$18; mixed, \$14 to \$16.

Straw.—Car lots, per ton, \$8.50 to \$9.

Bran.—Per ton, \$35.40; shorts, per ton, \$40.40.

Hides and Wool.

Prices delivered, Toronto:

City Hides.—City butcher hides, green, flat, 10½¢; calf skins, green, flat, 20¢; veal kip, 18¢; horse hides, city take off, \$6 to \$7; sheep, \$3.50 to \$5.50.

Country Markets.—Beef hides, flat, cured, 11¢ to 12¢; green, 10¢, to 11¢; deacon or bob calf, \$1.75 to \$2.50; horse hides, country take off, No. 1, \$6 to \$7; No. 2, \$5 to \$6; No. 1 sheep skins, \$2.50 to \$5. Horse hair, farmers' stock, \$25.

Tallow.—City rendered, solids, in barrels, 16¢, to 17¢; country solid, in barrels, No. 1, 15¢, to 16¢; cakes, No. 1, 18¢, to 19¢.

Wool.—Unwashed fleece wool, as to quality, fine, 60¢, to 65¢; washed wool, fine, 80¢, to 85¢.

Country Produce.

Butter.—Butter of all classes kept practically stationary in price, wholesale, selling as follows: Creamery, fresh-made pound squares, 51¢, to 52¢, per lb.; creamery solids, 49¢, to 50¢, per lb.; dairy, 38¢, to 45¢, per lb.

Oleomargarine, 30¢, to 32¢, per lb.

Eggs.—New-laid eggs also remained unchanged in price, selling as follows, wholesale: new laid No. 1, 45¢, to 46¢, per dozen; selects at 48¢, to 49¢, per doz.

Cheese.—Old, 30¢, per lb.; new, 24¢, per lb.; new twins, 24¢, per lb.

Honey.—Honey is off the market, none being obtainable on the Toronto wholesale.

Maple Syrup.—The first maple syrup for this season arrived on the market Wednesday, last week, selling at \$1.90 to \$2.25 per gallon (wine measure).

Beans.—Beans are still scarce and prices quite firm at \$6.75 per bushel for the Japanese hand-picked white variety—(wholesale).

Poultry.—Receipts continued to be light, but prices kept practically stationary as there has not been a very heavy demand—the one exception being for live fat hens which have been quite active owing to the near approach of the Jewish holidays: Chickens, milk-fed, 30¢, per lb.; chickens, ordinary fed, 24¢, per lb.; fowl, 3½ lbs. and under, 22¢, per lb.; fowl, 5 lbs. and over, 30¢, per lb.; ducklings, 25¢, per lb.; geese, 18¢, per lb.; turkeys, young, 25¢, per lb.; turkeys, old, 22¢, per lb. (These are the live-weight prices now being paid to the producer.)

Potatoes.—Potatoes have been rather scarce on the wholesales during the past week—Ontarios selling at \$1.85 per bag and New Brunswick Delawares at \$2 per bag.

Montreal.

Horses.—Dealers report that farmers continue to enquire for good plugs of horses for spring work. Their idea of price for these is generally \$150 apiece. Otherwise the market was dull, as follows: heavy draft horses, weighing 1,500 to 1,700 lbs., \$250 to \$300 each; light draft weighing 1,400 to 1,500 lb., \$200 to \$250 each; light horses \$125 to \$175 each; culls \$50 to \$75; fine saddle and carriage \$175 to \$250 each.

Poultry.—The market for poultry showed a distinctly firmer tone during the week, owing partly to the Jewish trade, and its requirements, for the Passover. Live birds seemed to have been most in demand with chickens at 26¢, per lb.; fowl 30¢, to 35¢; and turkeys around 27¢.

Dressed Hogs.—The Easter trade brought out an improved demand for practically all lines of provisions. Sales of abattoir-dressed, fresh-killed hogs took place at 29¢, to 29½¢, per lb., while country-dressed hogs brought up to 27½¢, these being pretty nearly high record prices.

Potatoes.—The market showed very little change as compared with the previous week, being perhaps a shade firmer. Green Mountains were quoted at \$1.75 per 80 lbs., Quebec white at \$1.65 to \$1.70 and reds at \$1.60, ex-store.

Maple Syrup and Honey.—Maple syrup was for sale here and there by the grocers, but wholesalers did not seem to have handled much. Shippers were said to be asking \$1.85 f.o.b. for small tins of 10 lbs. A purchase at \$1.70 is reported. Honey was steady, No. 1 white clover comb was 22¢, per lb., and No. 2, and also brown comb and white extracted were 19¢, to 20¢.

Eggs.—This being the Easter period, the egg market held firm, although purchases were being made at somewhat less than a week ago. Canadian and American stock were being purchased at 46¢, to 48¢, per doz. It was the general opinion that there would be a decline as soon as Easter was over, but the market was not looking for low priced eggs this year.

Butter.—The market was quite firm

(Continued on page 602.)



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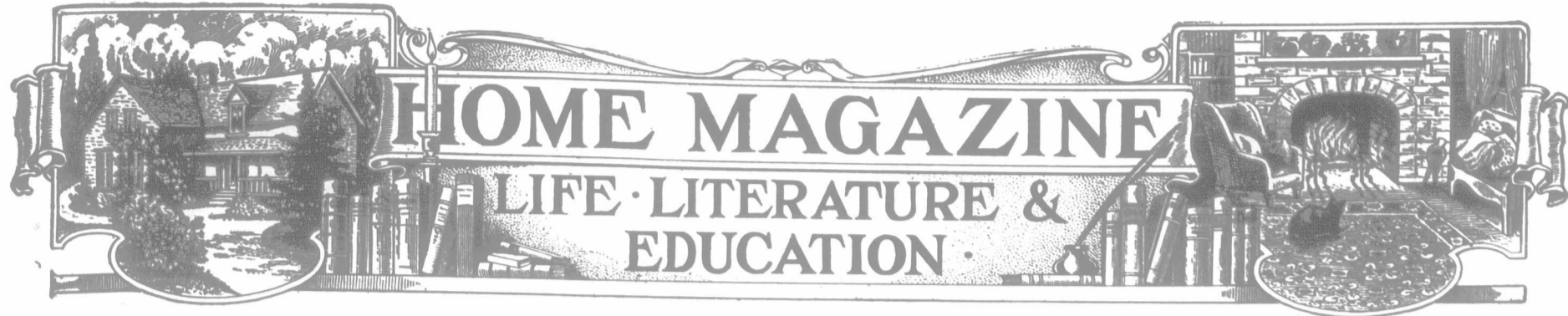
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O Lord of Peace, who art Lord of Righteousness,
 Constrain the anguished worlds from sin and grief;
 Pierce them with conscience, purge them with redress,
 And give us peace which is no counterfeit.

Travel Notes.

(FROM HELEN'S DIARY.)

Vevey, Switz., Feb. 15, 1918.

IF Monsieur Gillon, architect, interne français at Loèche-les-Bains, Switz., ever comes to know that I have culled the following extracts from his recent article in the *Journal des Internes Français* describing the evolution of the French atelier at Loèche I hope,—I sincerely hope that he will regard it in the light of a compliment. Being French, he probably will.

In all the camps of internement for French soldiers in Switzerland there is an atelier, sometimes several, and in a great number of cases they were started by a woman—just as the one at Loèche.

Begin originally to relieve the tedium of enforced idleness, these ateliers have developed into busy work-shops which serve also as schools for the re-education of wounded prisoners who will never again be able to resume their former occupations. In this way the prisoners are preparing themselves to be self-supporting after the war instead of being an encumbrance and expense to their country.

I will skip Monsieur Gillon's introductory paragraph, descriptive of the village of Loèche and substitute one of my own, merely saying that it is a well-known Swiss health resort high up in the mountains above the river Rhone. The hot springs for which it is famous are particularly efficacious for rheumatic troubles and cutaneous affections. It is at Loèche that the patients sit all day in the bathing pools, and have a merry social time together. Their meals are served to them on floating tables; also newspapers, or drinks, or anything they want.

The natives of Loèche take advantage of the hot springs by washing their clothes and dishes at the fountains at the street corners. And the hotels use the hot water for heating purposes—a tremendous advantage this season, when coal is almost unobtainable. The advertisements of the Loèche hotels which appear in the daily papers are most alluring. They advertise *chauffage illimité* (heat unlimited) which makes one feel like packing up and hurrying off there by the next train.

According to Monsieur Gillon, Loèche sleeps on a volcano.

There are the usual promenades to the usual cascades and glaciers, there are a few crooked lanes dignified by the names of streets, and there are the goat-paths without which no Swiss mountain village would consider itself respectable.

There are also three curiosities at Loèche: the Goat, the Barometer, and the *Atelier des internes*.

The Goat is an apocalyptic animal furnished with fantastic horns. It has no owner. It promenades at will in front of the hotels and displays its intense local pride by butting violently into the *internes*.

The Barometer, an obelisk in style antique, is the monument of Loèche. The great distraction of the *internes* is to consult it every five minutes during the day and note the probabilities. From morning until night—except twice a day during the hours when the *funjeulaire* arrives—the Barometer is surrounded by a group of *internes*. And it is even rumored that after 10 p.m. one may see a late-returning *permissaire* lighting a match and peering at the figures.

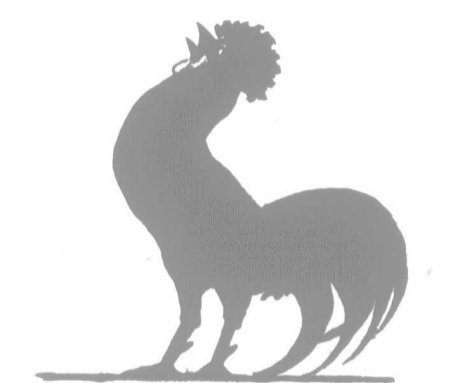
The *Atelier des internes* owes its origin to a French lady, the wife of a banker of

Geneva. She happened to be "taking the cure" at Loèche and noticing how bored the *internes* looked, decided to provide a work-shop for them by way of distraction.

A meeting was called on August 29th, 1916, to talk the matter over. Three days later the atelier was opened with an attendance of seventeen. Among the number were some farmers and vine-growers, one kitchen gardener, one baker, one druggist, one painter, one cabinet-maker, and a carpenter who became the head of the atelier.

The first article made was a kitchen table.

Later on tapestry and bead-work were taken up. But unfortunately this kind of work was hard to dispose of and something else had to be thought of. By good luck the services of a professional inlayer were secured for a short time, and the men were instructed in the art.



The French Cock.
 Emblem of France.

This time the atelier found its voice. By Christmas, carpentry, cabinet-making and inlaying were all in full swing. The bead-work was also flourishing, and a section had been started in raffia.

By March the atelier had made and disposed of 2,000 portmanteaux, numbers of tables and *coffrets* (small trunks or chests), and quantities of boxes of all sorts for handkerchiefs, gloves, sewing materials, cigarettes, etc. Also, a large order of candy boxes in raffia for Mr. Kohler, the big chocolate manufacturer of Vevey.

In May, at the various expositions where the work of the *internes* was displayed and sold, the Loèche atelier harvested 2,000 francs (four hundred dollars).

From that time on business has been so brisk that it is difficult to keep up with the orders.

There are now in the atelier twelve men who do bead-work, and six who do raffia, and there are fifteen inlayers or carpenters. Every month the cabinet-makers dispose of about fifteen decorated tables and about the same number of *coffrets*.



The Belligerent Goat of Loèche on Its Daily Promenade.

The articles now made are vastly superior in design and workmanship to those made at the beginning. Now, everything produced has a certain art value; the small articles are pretty in design and color, and in the inlaid work only rare woods are used.

Decidedly the waters of Loèche have had an effect most efficacious.

The patroness of the atelier is a charming lady, young, vivacious, and so unostentatious that for a brooch she wears one of our uniform buttons mounted for

her by one of the *poilus*. She is not only the mother of the atelier workers, but their sister and their very good friend. She sends them flowers and fruit from her garden, she makes them presents of socks, and just recently she offered to each one a trip to Geneva, including a three days' visit at her beautiful home there.

Briefly, our charming patroness has transformed Loèche for us, and each of the thirty-six workers would sacrifice himself to the utmost for her, if necessary. She has made the atelier so interesting that the resident doctor has been obliged to protest against the over-activity of some of the *poilus*, who would work fourteen hours a day if they were allowed.

BUT let us make a visit to the atelier. Here is the commander-in-chief, a Norman, determined, active, five bullets in the chest at Charleroi; he never thought when he was merrily knocking the billiard balls around that one day he would be stringing beads at Loèche.

Enter ladies and gentlemen. Entrance free. Give what you will on going out.

We are now in the room of the cabinet-makers. These finished articles are to be sent to the Swiss-American Commissioner. It is forbidden to touch them.

But come and see Paul—the man who does everything—a farmer. At present he is making the crosses of Lorraine out of pewter and decorating them with *repousse* work and glass jewels—rubies, emeralds, moonstones a *cinq sous la douzaine* (three cents a dozen). He mounts also brooches, and decorates belt buckles. He makes rings of aluminum, fancy pins, leather bracelets, and he cuts up these wooden French cocks into 65 pieces for his puzzle boxes. . . . His neighbor is a farmer also. With the aid of a hammer and a file he transforms ordinary nails into paper-cutters, button hooks, etc., and tints them artistically in a flame.

Be careful, gentlemen, or you will disturb these boxes containing the little pieces of wood geometrically placed for the inlaid work.

These are the four men who carve the various woods into little pieces—rosewood, mahogany, chestnut, plane, maple, orange-wood, etc.

Inlayers by profession, you ask? Oh, no. One is a baker, one a poultry-dealer, one a taxi-conductor, and one a cook.

Let us move on a little farther. At these work benches there is a machinist who makes *coffrets*, a house carpenter who planes them, a restaurant waiter who polishes them, an optician who puts on the locks and hinges, and a *sabotier* (maker of wooden shoes) who varnishes them.

Over yonder, in the corner is a fisherman from the Loire, who carves mottoes and texts; a boatman who makes pretty

otherwise engaged at present. Here are the finished articles: pendants, necklaces, purses, chains, bags and Russian collars of a very complicated design reproduced from memory by a farmer who had made one copy from a model.

But do not linger. Just one glance at the raffia work—beautiful boxes ornamented with ribbons in the colors of the Allies—so elegant and yet so simple.

BUT speaking seriously, the thing to be noticed particularly is the wonderful faculty of adaptation of the French workmen. One must not forget that these men are crippled and wounded, with injured arms, paralyzed hands or broken shoulders. Many of those who have been re-educated in this atelier have been repatriated, and new men have taken their places here.

Some day, perhaps,—after the war is over, the fisherman of the Loire will have his barge decorated with appropriate mottoes artistically carved; the boatman may have his oars painted with gorgeous butterflies; the baker will measure his cakes with a compass, and the poultry-dealer may absentmindedly carve his chickens into little sections. And if one fine day you should encounter on the boulevards of Paris an automobile covered with exquisite inlaid work you will understand immediately that the owner of the machine was once an *interne* at Loèche.

The Windrow.

Plans are being made for the establishment of an Anglo-American University at Plymouth, England. The idea is to make it a place of resort for graduate students from both nations, with teachers fully qualified to bring the best that each nation has to give.

Every bale of cotton that comes into the United States is now disinfected by gas to kill boll weevil and other pests, before it can be put on the market. Afterwards, when handling the bales, the operators wear gas masks.

Some eggs of the gigantic prehistoric ostrich, recently unearthed on the bank of the Yellow River, in Honan, China, are of gigantic size, each being about the bulk of 40 hen's eggs. Some of the shells are very brown with stains, others as white as though new-laid.

Gray's "Elegy" has been translated into Armenian, Bohemian, Hebrew, Hungarian, Japanese, Portuguese, Russian, Spanish, French, German, Welsh, Greek and Italian.

Eamonn de Valera, M. P. for East Clare, Ireland, and leader of the Sinn Fein element, was born in New York, of Spanish-Irish parentage. He is 34 years of age and a graduate of Blackrock College, where he gained a mathematical science scholarship. He claims that the Sinn Fein is now the strongest political party in Ireland.

The 51st Division of Highlanders has the honor of being placed on the German black list as the most terrible of all the fighting men in the British Army.

A pleasant lady customer was looking at tea-kettles. The patient clerk handed down large tea-kettles and small tea-kettles, aluminum, porcelain and copper. Finally the pleasant customer said, "Well, thank you very much. I was just looking for a friend."

"Wait", said the patient clerk. "Here is one more. Perhaps you will find your friend in that!"—"Harper's Magazine."

Hope's Quiet Hour.

On the Wings of Faith.

Jesus lifted up His eyes, and said, Father, I thank Thee that Thou hast heard me. And I knew that Thou hearest me always: but because of the people which stand by I said it, that they may believe that Thou hast sent me.—S. John 11 : 41, 42.

As far as we can measure the greatness of miracles, it seemed as if our Lord was purposing to show forth His miraculous power to the uttermost. Lazarus had been "dead four days" and decay had already begun. Could that corrupt flesh be restored again? Could any earthly sound reach those deaf ears?

It seemed impossible; and yet the Conqueror of death lifted up His eyes in joyous thankfulness to the Father for hearing and answering His prayer—before the answer came. The Prayer for power to raise the dead was a secret between the human soul of Jesus and His Father, but His thanksgiving was a public one. It was spoken in order to strengthen the faith of the people standing by, and it was a song of victory before the battle. It was a joyous expression of the certainty of faith. The thing which seemed impossible He welcomed beforehand. His prayer went up to heaven on the wings of faith, and He was so sure of the Father's response that the thanksgiving accompanied the prayer.

When you write a letter to a trusted friend, asking for something you are sure will be sent, you naturally say: "I am thanking you in advance;" though you don't forget to express your thanks again when your request has been granted. We are told to pray in faith, nothing doubting; so of course it is reasonable to thank God for attending to the matter we have placed in His hands, without waiting to see the answer. We have His bond, and in due time it will be redeemed.

"Have you been sometimes half afraid
God might not keep His word?
Seems prayer to fall in deafened ears?
Does Heaven seem blind and dumb?
Is hope deferred?—Believe—believe!
The answer-time will come.
God heard thee, He has not forgot,
Faith shall at length prevail!
Yea—know it! Not one smallest jot
Of all His word can fail.
For, if ye truly have believed,
Not vain has been thy prayer.
As God is true thy hope shall come
Sometime—some way—somewhere!"

There is a very interesting and inspiring story recorded in 2 Chron. 20. The people of Judah were in deadly peril, for great multitudes of foes were preparing to attack them. The king of Judah gathered his people together to ask help of the LORD; and out of all the cities they came to attend the great national fast. Their king was their leader in prayer, appealing to God for protection against the great company that was coming against them. "Neither know we what to do," he exclaimed, "but our eyes are upon Thee."

As the men of Judah (with their wives, children and even the little babies) stood expectantly before the LORD, a prophet gave them this encouraging message: "Thus saith the LORD unto you, Be not afraid nor dismayed by reason of this great multitude; for the battle is not yours but God's. . . stand ye still, and see the salvation of the LORD with you."

Now, notice the confidence of those people, who felt so helpless until they were assured that God was with them.

The king and people fell on their faces before the Lord, not in fear but in reverent thankfulness. The choristers then stood up "to praise the Lord God of Israel with a loud voice on high." Next morning a triumphal procession marched forth to win the promised victory. The singers went in the van of the army, praising the beauty of holiness and singing their glad anthem: "Praise the LORD; for His mercy endureth forever."

You see, they didn't wait until the battle was over before singing their "Te Deum". Why, their very certainty of victory helped to nerve their hearts and strengthen their hands. Perhaps it helped also to spread fear and confusion in the ranks of the approaching enemy.

The battle was won before Judah arrived, for internal strife caused the destruction of their foes. After three days spent in gathering the spoil—riches and precious jewels—the king of Judah returned in the forefront of his victorious army; returned to offer again their thanksgiving with psalteries and harps and trumpets in the Temple at Jerusalem.

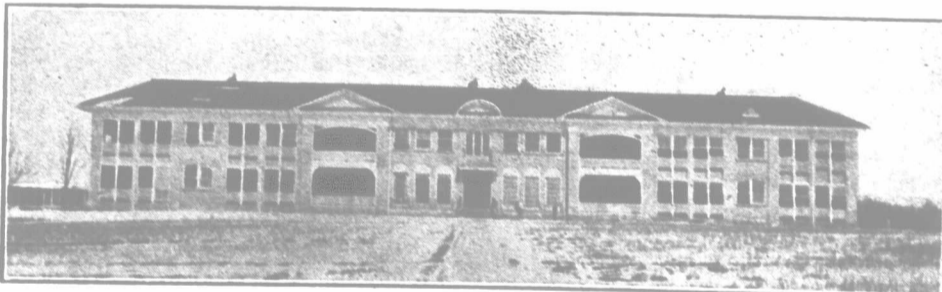
As a memorial of the great deliverance the valley where it occurred was called "Berachah", or "Blessing."

Anyone can thank God after His answer to prayer has been received; but we should be inspired by these examples of winged faith to thank Him in advance.

Try this plan, and see what a difference it makes in your prayers. You are pleading day and night for someone at the front. Your prayers drag with heavy feet upon the earth. You wonder doubtfully whether they can do any good. The peril is so awful, and your prayers seem too weak and helpless to weave a mantle of defence around that young man who is threatened with danger to body and soul.

Change your attitude and try our Lord's plan. Lift up your eyes and echo His confident words: "Father, I thank Thee that Thou hast heard me. And I know that Thou hearest me always." Keep on thanking God for the privilege of placing the matter in His hands and for your certainty that He will not forget nor fail you. Then your prayers will no longer drag feebly on the ground, but will mount up to heaven on the wings of faith. Then you will be able to rejoice, even in the midst of anxiety, knowing that humble, trustful prayer must receive an answer far greater than you can ask or think. Then you can wait, in hopeful patience, until He sees fit to show you the answer. The waiting may have to be all through this earthly life; but you can every day sing your anthem of praise, thanking God for the joy He is keeping in trust for you.

Perhaps your prayers are going up for someone at home, who is wild and wilful and seems to care nothing for God and goodness. You have prayed sadly, seeing no change as a result of your prayers; and yet praying on—with the half-formed thought in the back of your mind that some day God will hear and answer your petition. "Some day!"



The New Military Hospital, Byron, Ont.

Those of our readers who helped to contribute the \$500.00 for the equipment of a "Readers of the Farmer's Advocate and Home Magazine" ward in the new Military Hospital at Byron, Ont., will be pleased to see what the great building itself, now on the verge of completion, looks like. It has accommodation for about 100 soldiers, each ward containing four to five beds, and equipped with invalid chairs of the latest and best design. The windows, moreover, drop down into the walls for their entire length, giving the maximum of fresh air in the most convenient way. At the rear are a splendidly equipped kitchen with electric stove and warmers, operating rooms for surgery and dentistry, etc., the whole forming one of the most complete hospitals in Ontario.

So Martha dolefully expected that her brother would rise again "at the last day". So she said hopefully to the Friend who seemed to have arrived too late to help her: "Lord, if Thou hadst been here, my brother had not died." Her faith in His power was not entirely quenched, for she continued: "But I know, that even now, whatsoever Thou wilt ask of God, God will give it Thee".

She said He could help "even now" even when death had stepped between her and her brother—but did she really believe what she said? If she did, why was her protest so earnest when our Lord said: "Take ye away the stone?" Why did she try to interfere with His plan of help?

St. John, in one of his letters, expressed his confidence that if we ask anything according to God's will, He heareth us. "And if we know that He hear us, whatsoever we ask, we know that we have the petitions that we desired of Him."

It is according to His Will that you pray for that weak or blind soul. Therefore you "know" that you "have" the desired petition. Why shouldn't you lift up your eyes and thank Him for the answer which is already given, though

you can't see it yet? You put seeds into your garden, and you know they are growing, although you can't see the white roots feeling their way into the depths below, or the green shoots pushing their way up towards the sunshine. You expect to wait awhile before seeing the results of sowing. Is the seed of Divine truth likely to spring up and bear fruit in a day or a week? In our Lord's parable of the Sower He warned us that it was the shallow soil (with no depth above the hidden rock) which showed results very quickly. Pray on, but send your prayers up on the wings of faith—faith which expresses confidence by thanksgiving. Don't wait until you see the answer before you thank the Giver. That would be a proof of faithlessness. You can trust His promise, do you think His written word is only "a scrap of paper?" Thank Him as you pray, knowing that if you ask according to His Will you "have" already the answer which you can't see just yet.

A chaplain at the front, holding a service in the corner of a field, invited the fifty men present to openly consecrate themselves to God, and seal the covenant by joining in the Sacrament of the Lord's Supper. The whole company stepped forward in answer to his invitation. "I have no doubt," wrote the chaplain, "that every one of them was an old Sunday-school scholar. They responded to my appeal because the music of the old Sunday-school teachers' voices was still ringing in their hearts."

The old hymns, sung in childhood, go straight to the heart when they are most needed. A few days ago I received a letter from a friend, in which she wrote: "Don't you think it is rather strange that although I have read hundreds of poems I have always returned to my first love: 'Leave God to order all thy ways?' I committed it to memory before I was twenty, and it is still my prime favorite".

I don't think it is strange, any more than I think it is strange that a middle-aged officer almost broke down in tears when someone quoted to him the children's hymn:

"Now the day is over,
Night is drawing nigh "

Easter Morning Thought.

(BY A READER OF "THE FARMER'S ADVOCATE.")

Did you waken very early Easter morn?
I never yet have seen Nature adorn
Her world so perfectly, as she did then.

The eastern sky was rich in ivory and gray,
The birds sang sweetly to the breaking day
And morning freshness lay on all the earth.

I am not an artist yet its beauty made
My pulse beat quickly, and my thoughts
were led
Back to the past, and there fresh joy I
found.

Nature it seemed with special beauty
fraught
This morning, and there was this glorious
thought,
"That Christ indeed arose and con-
quered death."

ANNIE W. AFFLECK.
Appleton, Ontario.

For Passing Souls.

For the passing Souls we pray,
Saviour meet them on their way,
Let their trust lay hold on Thee
Ere they touch Eternity.

Holy counsels long forgot
Breathe again 'mid shell and shot,
Through the mist of life's last pain
None shall look to Thee in vain.

Thou wilt speak through flood or sword
To the hearts that know Thee, Lord,
Just beyond the cannon's roar,
Thou art on that farther Shore.

For the passing Souls we pray,
Saviour, meet them on their way;
Thou wilt hear their yearning call,
Who hast loved and died for all.

C. C.

An Easter Message.

A True Incident.

It was a sultry evening towards the end of August and the air was heavy with smoke from fires in the large swamp, some miles from where we lived, when I saw flying through the air, what I thought was a bat. It beat on the window where I was sitting and then rested on the sill and I saw it was the large beautiful moth, the Emperor (very rare). I went out and brought it in on my hand, and studied it, and this was the message it gave me: "I was a worm of earth I slept in the prison house of death, and at the appointed time, I burst my bonds, and came forth, a new creature, a winged insect of the air, free to go, as the wind."

In the morning I watched it preparing for flight, the great transparent wings, moving like sails. Away it flew—God's little messenger, and I thanked Him, for the blessed hope all believers have, of a resurrection and reunion, through Christ our Saviour.

FAITH.

Current Events.

The Legislative Assembly at Toronto was officially prorogued by the Lieutenant-Governor, Sir John Hendrie, on March 26.

A giant meeting of Trades Unionists, Single Taxers and United Farmers, met in the Labor Temple, Toronto, with the object of forming a Labor Party somewhat similar to that in Great Britain, and taking steps to secure representation in the Dominion Parliament and Ontario Legislature.

The rioting in Quebec which began on March 29th and lasted for two days, has been promptly stopped by the military, the city now being under martial control, with machine guns mounted at strategic positions. During the rioting several persons and horses were injured, and some buildings damaged, including two hardware stores and the offices of the "Chronicle" and "L'Evenement," both of which were wrecked. Both of these papers were vigorous supporters of the Military Service Act.

The most important war news at time of going to press is that General Foch, whom Joffre has described as "the greatest strategist in Europe and the most humble," has been given supreme

command of all West front. At fighting is being of the city of Am immediate objective army, the Kaiser St. Quentin. In soldiers have ag selves, one divis held a hill, whil operating with fantry on March and the wood no greatest encoura fact that the ene front of 70 miles siderably, and it they have passe offensive, while t Allies have not Before this reach the counter attac the opposing for struggle that dwa In the meantime in the resistance o face of fearful od greatest events i many places the them two to one, to one; it is now onslaught on th brought up 27 div against which th divisions of 9,000 items state: Th again launched Lens; that certa Irish battalions h selves by outstan Americans are no the French line, defence of Paris. 25th, 27 long dis Good Friday one mass was being c and injuring 90, may be resumed Austrians are aga the northern bor

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command of all the Allied armies on the West front. At this time the fiercest fighting is being waged within 10 miles of the city of Amiens, which is the immediate objective of the Crown Prince's army, the Kaiser, meanwhile, being at St. Quentin. In this vicinity Canadian soldiers have again distinguished themselves, one division having successfully held a hill, while a division of cavalry, operating with British and French infantry on March 31st, recaptured Moreuil and the wood north of that place. The greatest encouragement comes from the fact that the enemy attacks along a whole front of 70 miles have slowed down considerably, and it is now believed that they have passed the climax of their offensive, while the reserve armies of the Allies have not as yet made a move. Before this reaches its readers, however, the counter attack may have begun, and the opposing forces may be locked in a struggle that dwarfs everything preceding. In the meantime the Allies are glorying in the resistance of our men, which, in the face of fearful odds, has been one of the greatest events in military history. In many places the enemy outnumbered them two to one, and in some places eight to one; it is now known that in the first onslaught on the British lines they brought up 27 divisions of 7,000 men each, against which the British had only 27 divisions of 9,000 men each. . . . Minor items state: That the Canadians have again launched a great gas attack at Lens; that certain English, Scots and Irish battalions have distinguished themselves by outstanding valor; and that the Americans are now holding a portion of the French line, releasing troops for the defence of Paris. In that city, on March 25th, 27 long distance shells fell, and on Good Friday one struck a church when mass was being celebrated, killing 75 men and injuring 90. . . . In Italy fighting may be resumed at an early date as the Austrians are again massing troops along the northern border.



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The Ingle Nook

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

"Who is the happiest person in the world?"—The question came up as a sort of bluff against the misery of the hour, and the answers came back in like spirit.

"The inventor who perfects a great invention."

"The young lovers we met last night."

"A mother with her first baby."

"A boy with a dog."

But I almost thought it might be one of Canada's "Firsts" whom I saw on the street the other day. He was to be known by the little square of red on his arm, almost at the shoulder, and he was gripping by the hand his little son, perhaps ten years of age, who was only about six when he went away. He was looking down into the little lad's face, smiling, and the lad was looking up into his, smiling, and the two of them were having just the "chummiest" chat in the world.

Just to think—of all the married men who went away in those first contingents only fifteen have returned! Bronzed from exposure, with serious faces, they have come back from the hell of war. Truly they have "measured up" in those long years of sacrifice, and surely it is up to us at home to measure up also, for their sakes and the sake of those thousands of others who are bleeding, and wearied, and dying to-day on the fields of France and Flanders, every one a christ dying for others—for us.

Did you read it in the papers?—that Mr. W. F. Nickle, M. P., for Kingston, under which parliament is asked to pass certain legislation in regard to titles: (1) that hereditary titles shall neither be bestowed nor perpetuated in Canada. (2) that the use of any title or honor shall be limited to the person who received it:—Thus, the wife of Sir John Smith must be plain Mrs. Smith, etc.

This last clause, Mr. Nickle explains, is to bar "ladyships", the social ambitions of women being held to be a fruitful cause for the all too general grasping for titles. This may be true, for many a man of good commonsense in everything else will make a jackdaw of himself in certain ways to please some woman, while there are wives in plenty who would be glad enough to be called "Lady", and to be known as the wife of the illustrious "Sir" so-and-so.

It is to be hoped that Mr. Nickle's resolution will be speedily and fully carried into effect. In the face of a world-war against autocracy it ill becomes so democratic a country as Canada to permit hereditary titles, the very insignia of autocracy. Moreover it is time that our women were one and all past the stage of being dazzled by trinkets. Womanhood to-day should be too big, too "grown up", to think anything of being called "My Lady", or of whatever social prestige such a labelling may bring. It is only a very superficial society that gives homage for any such cause. When people are truly "grown up" they estimate men and women only by what they are and what they do, caring nothing whatever for the tinsel of rank.

JUNIA.

The Fashions.

How to Order Patterns.

Order by number, giving age or measurement as required, and allowing at least ten days to receive pattern. Also state in which issue pattern appeared. Address Fashion Department, "The Farmer's Advocate and Home Magazine," London, Ont. Be sure to sign your name when ordering patterns. Many forget to do this.

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Poor Old Folks— Looks as if they'll have to go "over the hill to the Poor-house."

Their children either can't or won't support them.

Tragic? Yes! But not half so tragic as the old folks' remembrance of the fact that their present plight is due to their lack of foresight in not making provision for their declining years.

Be independent in YOUR old age.

A small amount invested annually for a few years in an Imperial Endowment Policy will enable you to end your days in comfortable independence instead of as a burden upon the charity of friends or in a paupers' home.

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Needle Points of Thought.

"We have no intellectual right to be ignorant when information lies at our hand, and we have no spiritual right to be weary when great moral issues are at stake." —AGNES REPLIER.

"The big job of constructing a League to Enforce Peace or some equivalent is foreseen as an after-war necessity by all prophets."

—The Independent.



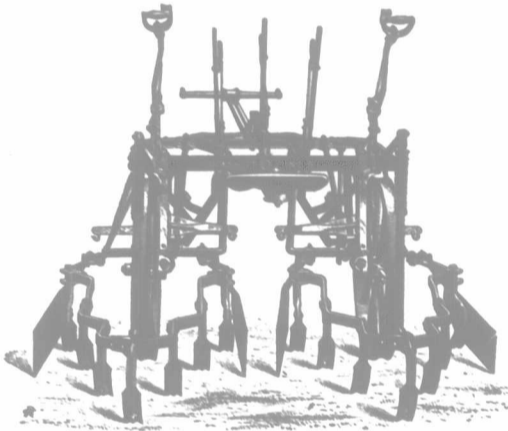
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Infantile Paralysis



made it impossible for this boy to stand, so he crawled on hands and knees. Four and a half months' treatment at the McLain Sanitarium "put him on his feet." Read his parent's letter.

We are pleased and very thankful for the improvement our boy has made. When we came to the McLain Sanitarium, March 22, 1917, he crawled on his hands and knees. After four and one half months' treatment he can stand erect and walk without crutches or braces. Will be pleased to answer letters concerning what you have done for our boy. Mrs. Chas. D. Speidel, Hanoverton, Ohio.

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The McLain Orthopedic Sanitarium
861 Aubert Avenue St. Louis, Mo.



Candied Cherries, Etc.
Dear Junia.—Week after week on the arrival of the "Advocate" I have turned to the "Ingle Nook" page, to see if any one had responded to "subscriber's wife" of Quebec, regarding her query about candied cherries.

As I have not yet seen any other recipe for that delectable fruit I think I will send mine, and I can assure you they are simply delicious, either to put in cake or to decorate it. They are also nice just to eat as a sweetmeat.

Now then I am going to ask "Katydid's pardon for taking exception to her plea for Pussy". I like cats, and I love the birds and I want to say that a dozen bells on a cat's neck would never save one of the little baby birds just out of the nest and feebly trying to fly. Cats will run up trees almost as nimbly as a squirrel if they have the faintest idea of there being a nest of young birds up in the branches of that same tree. With the exception of crows, I believe cats are the greatest menace the birds have to contend with, but I will admit the well fed house-cat is perhaps not quite so great a sinner as the vagrant. I cannot find words forcible enough to express my contempt for those people who will carelessly allow two or three families of kittens to grow up until cold weather comes, then, finding the cats too numerous proceed to bag up half a dozen or so, and dump them out in some lonely spot, or in front of some farm, which is already well supplied in that line. Katydid, have you ever tried "Phosphar rat paste"? Just spread it on bread and put it where the rats can get it. The first night they will eat it all, the next night they won't eat any of it, for the simple reason (unless they are very plentiful there will be no rats there, at least that has been my experience. As for mice I never have any trouble catching them with one of those little spring traps, and a mite of cheese.

Now Junia I did not mean to say so much when I first started but if you caddy some cherries after this recipe I know you will pardon me.

Candied Cherries.—One lb. sugar to each (pitted) pound of cherries (sour cherries). Make a syrup by boiling the sugar with a very little water; pour over the cherries, let stand over night. Next morning drain off the syrup, let it boil up again, and again pour over the cherries and let stand over night. The next morning boil cherries and syrup together until fruit looks transparent. Set away until the next morning. Drain the syrup from the cherries and spread them on platters and put in the sun to dry, when dry enough roll in granulated sugar and pack in jars. Other fruits may be done in the same way.
Brant Co., Ont. PASS-IT-ON.

Women's Work on the Farm.

EDITOR "THE FARMER'S ADVOCATE":
I have been much interested in the articles appearing from time to time concerning women's work on the farm.

I cannot agree with "Householder", Lanark Co., when she says that the present generation are weaklings owing to our mothers and grandmothers being overworked. If the present generation had lived healthy out-of-door lives instead of stooping over lessons early and late during the growing period of their lives, they would have been more robust. Our school system needs to be thoroughly reconstructed as recommended by "The Owl" in recent articles.

During the last two harvests the women of Canada have heroically filled the breach (to a great extent) left by our brave boys who have gone overseas. This year the need is greater than ever and I feel sure that the soldier laddies in France and Flanders will not be disappointed in the girls they left behind them. I think that where there is one girl (or more) in the family should make it a matter of conscience to do as much as possible during the coming busy months, but a mother with a family of small children should surely be exempt.

The idea of a uniform for girls working out-of-doors is a good one, I have tried skirts, overalls, and last year I tried bloomers and in bloomers I stay. During the seeding I only had to drive the team one day. I had a four-horse team on the cultivator with two sections of harrows tied behind. When the hay was ready they called on me to rake, then the mow needed leveling. In a few days I was promoted to driving the team on the mower. (That beat leveling by a long shot.) We sure were glad when the last

load (106th) was came hoeing. Then I cut the grain, m and I did the st from my second By changing we managed the ha teams. My cou and I mowed a the horse on the when the last she some days that of us would be a lived to tell the forward to another ing you every suc Huron Co., O

Of course you that book work with out-door wo what "Owl" mea very far without contain the wis of the experimen ever line we take all the experimen thing for ourselv brink of the grave more than a ver never, never des is the very least them we should savages.—But of this, do you not? work out of doors

Snow In
Dear Junia—M pancakes with s winter too, the flour and eggs. T powder were mi batter and the s last moment and fault with them I

Carleton Co., N

About Patten

Quite often ou receives letters a patterns of certain of designs that h in our paper. P cannot do either are made by a whom we send the patterns directly f order them. The cut any patterns During the past owing to the coal for cutting the more than once, wait for their pat It is hoped that again, for such o annoying to both customers.

In regard to sen tion to this or an gular articles, not one rule: Be addressed stamp of the manuscript not used; and b postage is placed b the outside one, publisher is oblig ledge receipt of the The reasonable be seen when it is thousand articles year. A little o anyone to see wha ture of the public, if time and money, if

The sad-looking table had been w his order. Finally and, with a flourish be coming in a m The sad man lo me," he said, "wh

While Jane, the her first lesson on table, some one ir put something u below. "What's t quickly. "Why tl responded her n Jane, "he's a s-c Collier's.

load (106th) was in the barn. Then came hoeing. Then harvest. My father cut the grain, my brother, aged fifteen, and I did the stooking with some help from my second brother, aged twelve. By changing work with my uncle we managed the hauling nicely with two teams. My cousin, my second brother and I mowed and took turns driving the horse on the rope. Were we sorry when the last sheaf was in? We thought some days that all that would be left of us would be a grease spot, but we have lived to tell the story and are looking forward to another busy summer. Wishing you every success.

Huron Co., Ont. FARMER LASS.
Of course you mean, Farmer Lass, that book work must go hand in hand with out-door work and learning. That is what "Owl" means. We would not get very far without books, because they contain the wisdom and conclusions of the experiments and experts in whatever line we take up. If we had to make all the experiments and so find out everything for ourselves we would be on the brink of the grave before we had gone over more than a very few steps. We must never, never despise books, and "Owl" is the very least likely to do so. Without them we should be little better than savages.—But of course you really mean this, do you not? . . . But what splendid work out of doors you are doing!

Snow Instead of Eggs.

Dear Junia—My mother used to make pancakes with snow instead of eggs in winter too, the English pancake—milk, flour and eggs. The flour, salt and baking powder were mixed to a smooth, stiff batter and the snow beaten in at the last moment and we children found no fault with them I can assure you.

Yours truly,
J. M. HUDSON.

Carleton Co., N. B.

About Patterns and Manuscripts.

Quite often our Pattern Department receives letters asking that we "cut" patterns of certain things, or send patterns of designs that have not been published in our paper. Please remember that we cannot do either. All of our patterns are made by a firm in New York, to whom we send the orders and who send patterns directly from there to those who order them. They do not undertake to cut any patterns except those illustrated. During the past two or three months, owing to the coal situation, the machine, for cutting the patterns was "tied up" more than once, and so people had to wait for their patterns for several weeks. It is hoped that this will not happen again, for such delay is certainly very annoying to both the manufacturer and customers.

In regard to sending articles for publication to this or any other magazine (regular articles, not "letters") there is but one rule: Be sure to enclose a self-addressed stamped envelope for return of the manuscript in case the article is not used; and be sure that sufficient postage is placed both on this envelope and the outside one. If this is not done no publisher is obliged to return or acknowledge receipt of the article.

The reasonableness of this rule will be seen when it is considered that several thousand articles may be received in a year. A little calculation will enable anyone to see what must be the expenditure of the publishing company in both time and money, if it is not adhered to.

The sad-looking man at the corner table had been waiting a long time for his order. Finally his waiter approached and, with a flourish, said, "Your fish will be coming in a minute or two now, sir." The sad man looked interested. "Tell me," he said, "what bait are you using?"
Harper's Magazine.

While Jane, the new maid, was taking her first lesson on arranging the dining-table, some one in the basement kitchen put something upon the dumb-waiter below. "What's that noise?" asked Jane quickly. "Why that's the dumbwaiter," responded her mistress. "Well," said Jane, "he's a-scratchin' to git out."—*Collier's*.

The Beaver Circle

The Robin's Song.

BY G. E. CURTIS.

Do you hear the song that the robin is singing
From the top of the cherry tree?
O look and listen, for he is bringing
A message to you and to me:
"Cheer up, cheer up, cheer up."

See, the breezes have scattered the straws
and the stubble
That he gathered to build his nest;
And it's rainy and cold, but he laughs at
his trouble,
And jubilant, pours from his breast:
"Cheer up, cheer up, cheer up."

Yes, robin, we hear the song you are singing,
The message of love and of cheer;
It will dwell in our hearts; and we still
shall hear ringing
Through the days that are somber and drear:
"Cheer up, cheer up, cheer up."

Little Bits of Fun.

Reproof.—"Who was Shylock, Aunt Ethel?"
"My dear! And you go to Sunday-school and don't know that!"—*Life*.

Bessie is a bright one. The other day her teacher set her and her schoolmates to drawing, letting them choose their own subjects. After the teacher had examined what the other children had drawn she took up Bessie's sheet.

"Why, what is this?" she said. "You haven't drawn anything at all, child."
"Please, teacher, yes I have," returns Bessie. "It's a war picture—a long line of ammunition wagons at the front. You can't see 'em, 'cause they're camouflaged."—*Edmonton Bulletin*.

Some of the Prize Essays.

My Show Calves.

BY MELVIN CARTER, PORT LOCK, ONT.

When I heard of the Royal Bank giving a prize for the best calf, I thought I would feed my calf well and try to win at our two fairs. I could not show the same calf at the two fairs, but I was not stuck, for I had another good calf. One was a male, the other one was a female. The male was a pure-bred Hereford, and I called him White Faced Duke. He sucked the cow, but I didn't let him run with the cow. I kept him in a yard beside the barn. He would always get his milk three times a day. In the morning the cow always went to the pasture, but at noon she would come back to her calf.

One day I decided to put the halter on Duke. No sooner had I got it on him than he started away, but I could easily keep up with him because he was so stout and fat he couldn't run very fast. However, he soon got used to the halter and would go along very well. When fair day came I carried him down, and had his coat shining, and his face was as white as snow. When I drove him through the town the people were laughing at him, because he was so stout and fat. When I reached the fair grounds with him I tied him up alongside of his mother. I then went to my dinner, and when I came back he was loose and was fighting with a yearling. He beat the yearling and seemed to be very proud of it. I tied him up and then the judges came along and said, "Bring out your calves, boys." There were one Ayrshire and two Shorthorn calves against my calf, but my Duke got the first prize, for the bankers' prize and the agriculture society prize.

At the other fair I showed my grade heifer calf. It is also a Hereford. This calf was pail-fed. She got milk twice a day with calf meal. I called her Beauty. One day I got the halter and put it on her and away she went, but she soon got away on me because she could run faster than my other calf. I cornered her up and got hold of the rope once more. This time I didn't let her get the start on me, and I soon had her broken in to lead almost as well as a horse. The day before the fair I brushed at her almost all day and her coat was shining. When I got to the fair there were two calves against mine.



EGG-O

The Tasteless Baking Powder

ONE housewife who has used Egg-O for the past seven years told us that what she liked most about Egg-O was that you could not taste it in the cake. We hadn't realized it before, but that is a mighty important point. So often you can taste the baking powder in the cake, and it certainly spoils your enjoyment in eating it. Perhaps you have this trouble with your baking. We would recommend that you use Egg-O—the tasteless Baking Powder.

THE Food Control Department has told us that flour must be conserved for the use of the Allies. Try some of the baking powder breads which use a part substitute for wheat flour. You will find them very palatable and generally enjoyed by your family and friends. This recipe for Oatmeal Bread is very satisfactory:

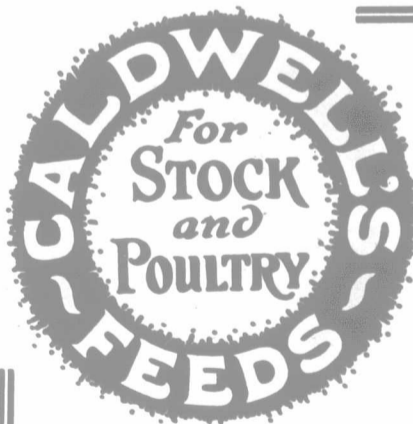
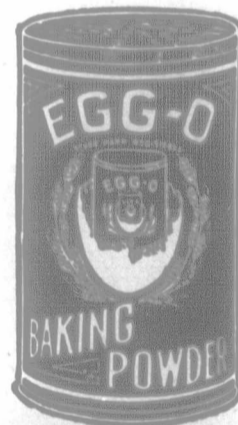
- 1 cup flour
- 1 1/4 cups cornmeal
- 1 teaspoon salt
- 3 teaspoons Egg-O Baking Powder
- 2 tablespoons sugar
- 1 cup cooked oatmeal or rolled oats
- 2 tablespoons shortening
- 1 1/4 cups milk

Sift together flour, cornmeal, salt, baking powder and sugar; add oatmeal, melted shortening and milk. Bake in greased shallow pan in moderate oven 40 to 45 minutes.

Order Egg-O from your grocer to-day. Pound size or larger is the most economical way to buy.

If your grocer does not sell Egg-O, send us 10 cents and your grocer's name and we will send you a trial tin (1/4-lb. net weight) of Egg-O Baking Powder and the book of Reliable Recipes as well.

Egg-O Baking Powder Co., Limited
Hamilton, Ont.



Conserve Milk

FEED CALVES OUR

CREAM Calf Meal

Get in step with the times and save! Save your skim milk and whole milk and turn it into cheese or butter. Raise all your calves on Caldwell's Cream Substitute Calf Meal. It will

not derange their systems—they will develop equally as fast as on milk, and the cost will be considerably less. You also save your milk for other needed purposes.

Give Caldwell's Calf Meal a trial at once. After you note the saving—tell your neighbors about Caldwell's, the calf meal that is "doing its bit" toward saving needed food. Directions for feeding come with every sack.

Feedmen all over Canada handle Caldwell products, or we will supply you direct.

The Caldwell Feed & Cereal Co., Limited
Dundas, Ontario

Makers also of: Molasses Horse Feed, Dairy Meal Hog Feeds and Poultry Feeds of all kinds.

When writing advertisers will you be kind enough to mention The Farmer's Advocate



Military Service Act

Important Announcement to All EXEMPTED MEN and to the Public Generally

IN dealing with the very large number of claims for exemption brought forward for consideration in connection with Class 1 under the Military Service Act, it has occurred, as was inevitable, that as a result of false statements and difficulties put in the way of investigation, some individuals have secured exemption whose proper place is in the Army.

It is not the intention of the Government to allow these men to evade permanently their obligation to bear their part in the military defence of the Country and of the ideals for which we are fighting. To do so would defeat the purpose of the Act, and cause grave injustice to men in the second class necessarily called out to fill their places.

Exemptions Granted on False Grounds

It is, therefore, proposed to scrutinize carefully all exemptions granted to date in order to separate those which have been granted on false or insufficient grounds from those that are well founded.

With this object in view the various Registrars under the Military Service Act have been instructed to issue a series of questionnaires to exempted men. These questionnaires must be filled up correctly and returned promptly under penalty of forfeiture of exemption for failure to do so.

Exempted Men Who Have Changed Address

It is therefore important in their own interest that all exempted men who have changed their address since their exemption was granted and who have not already notified the Registrar of such change should notify him at once. Under the Regulations it is the duty of exempted men to keep the Registrar advised of any change of address, and failure to receive the questionnaire by reason of neglect of this duty must be treated as equivalent to failure to return the questionnaire after receipt.

Citizens Urged to Assist

In many instances information has been furnished by members of the public which has led to the cancellation of exemptions obtained by false or misleading statements. Further co-operation of this character is invited. The Government regard it as the Duty of all loyal citizens, not only to the Country, but to the men at the front, to assist in this way in securing reinforcements on a just and legal basis. Correspondence of this character will be treated as strictly confidential and will receive the fullest investigation.

CHARLES J. DOHERTY,
Minister of Justice.

Correspondence should be addressed to the Registrars
under the Military Service Act.

One was a Holstein and the other a Hereford. However, I seemed to be very lucky because I got the first prize at that fair too.

And if there are any prizes given this year I think I will try for them.

A Pet Crow.

BY WILLIE MELVILLE, VALENTIA, ONT.
Dear Puck and Beavers.—Although I have often thought of writing this is my first letter to your Circle.

Have any of the Beavers ever had a pet crow? I am going to tell you a story of a few of the pranks of "Peter."

When I was in the woods last spring I saw a crow's nest in a tall spruce tree. I climbed up to it and saw three young crows in it. They seemed about a week old. I took one of them home. I fed him on fishworms. He was very ugly when I got him but he soon grew feathers. Peter soon learned to fly. One day I

ONTARIO GROWN ROOT SEEDS

Giant White Sugar Mangel. Grown from large, smooth, easily harvested roots, of the variety standing first in the fifteen year tests at Guelph. Seed germinates 187%. Price, \$1.00 per lb., or 4 lbs. and over at 85c.

Detroit Blood Red Beet. Recommended by dairymen for feeding during tests for butter-fat. Germinates 176%. This is good seed and you save from 50c. to \$1 per lb. Price, 1/2 lb., \$1.00, 1 lb., \$1.75.

Dwarf Essex Rape. This is the best variety and the seed is good. Per lb., 20c.

Garden Seeds. Egyptian Beet, Detroit Blood Red Beet, Chantenay Carrot, Icicle Radish and Hollow Crown Parsnip. These seeds are right and so are the prices.

Farmers' Club Orders of \$35.00 or over receive 10% discount. Each member's seed put up separately if names are given.
Grown and sold by **RALPH R. MOORE**
at **NORWICH, ONT.**

Credit Grange Farm Berkshires

Large size, hardy, thrifty stock. Only a few bred sows, but a large number of young boars and gilts.

J. B. PEARSON, Manager
Meadowdale Ontario

When writing please mention this paper.

gave him a hard crust of bread. He couldn't eat it. What do you think he did? There was a pan of water standing near, so he went to it and dipped it in the water to soften it. Wasn't that pretty wise?

Peter used to like to play with the kittens. He would pull their tails with his beak, and the kittens would try to hit Peter with their paws. One day the dog had a bone which Peter wanted. He tried to get it but the dog knocked him over. Peter lay on his back, shut his eyes and made believe he was dead.

Peter was very cleanly. He washed himself often by jumping in a dish of water and splashing with his wings. He often hid until he was dry.

Very curious was Peter. He had to see everything that was going on. We had some little pigs, and Peter used to nip their tails and make them run.

In the autumn he started to go to visit the neighbors. He would go away

in the morning and come home before sundown. One day he never came home. We are often asked by the neighbors, "Where is Peter?"

A Horse Story.

BY HELEN GARDINER, R. R. 2,
KINGSTON, ONT.

Dear Puck and Beavers.—This is only my second letter to the Beaver Circle, but I always enjoy reading the other Beavers' letters. Father has taken "The Farmer's Advocate" for over twenty years, and my grandfather had taken it nearly ever since it was first published.

What you told about skunks, Puck, was very interesting to me, because I did not know very much about them—in fact, I never saw one, although the odor of the air often told me that they were near. I thought I would tell you about our horse, Nell, who is "wondrous wise," and how she was one day too wise for her own good.

Old Nell—for her age is more than twenty years, perhaps twenty-five—is fox-colored and has a pretty, white face. Because of her antiquity she is not very strong and tires out easily. Nearly all last summer she enjoyed herself in the pasture, only being used occasionally to drive a short distance or on the hay rake.

The beautiful green grass and the easy life was not all Nell wished. Her cup of happiness was not full—it lacked grain. In a large, tin box in the corner of the wood-shed we keep the hen feed. Old Nell by some mysterious power of the nose detected that grain, and several mornings we found things looking rather untidy and the cover off the hen-feed box. We did not know who the culprit was until one morning I heard a great clatter in the shed. I ran out and saw the old horse with her head in the tin box. When I ran out our little red cocker-spaniel ran out too, and shocked at the sight of a horse in the wood-shed leaped at the disturber. The horse, thinking she had partaken of all the grain which it was wise under the circumstances prepared for a hasty exit.

The end of the wood-shed nearest the house has a platform extending out about ten feet. The part of this nearest the door is partitioned off as a coal-bin, having the end at the edge of the platform open. On the floor were several old agate pots, a tin of axle grease, some harness oil, a discarded coal-oil stove and other such articles.

When the dog sprang barking at her, Nell backed up very suddenly, and in such a hurry was she that when her hind feet struck the edge of the platform she sat down on it with great force, which rattled the whole building. I did not know what to do. She could not move either way, because she was in the part partitioned off, and so she sat there, all four feet sticking out in front of her. When I had recovered my senses enough to think of running for the men and was about to do so she gave a lurch forward and having got upon her feet again bounded out the door, but not yet free from the horrors of the wood-shed—for on her tail, the hairs of which had caught in the lugs, hung an agate pot which kept striking against her heels.

When she had galloped out of sight I turned to survey the wood-shed. The cover of the tin containing the axle grease was bent in, the coal-oil stove was flattened out, and the other things were also disfigured. The humor of the incident then struck me and I sat down on the platform to laugh.

Old Nell is also very fond of apples. Several times she has snapped an apple out of my hand when I have been eating it. I could tell you several more amusing "doings" of this old horse, but I am afraid my letter is getting too long.

Molly.

BY LUCILE GLASS, R. R. 3, THORNDALE,
ONT.

Molly is a cat—just a common, everyday Maltese cat. She has a dark gray fur coat with a few darker markings on it, and even her nose and little cushioned feet are gray. She is pretty old now, as cats go, but her life has not been uneventful, as her many scars will show.

Molly was not always old, as all of you will know. She was one of a family of four, all very much alike, especially when kittens, just little, round balls of grey fur, from which loud meows of hunger or happy purrs of content often sounded.

Molly wasn't left very long with her

The Mak-

ONE of the Sta used is The at Bronte. in the "Farm 7th, Mr. Daw the Lakeview "Farm & Dai

"It is working ing two 12-inc stiff grade behi can't beat the q it is a one-man about 5 acres to stop for rain the car and go the plow and la for the novel plowing with horses on the turned over jus had two single field and they a day.

Heating? N particular tro run 10 hours in the radiator

The Staud tractor attach Ford car. S radiator, water tiblade fan ar part of the pe the Ford car. ment can be i a few minutes

THE AUTO-TR 157 Bay Str

Advertisements v heading, such as Situations Wanted TERMS—Three Each initial counts two words. Names Cash must always advertisement insert

COLLIE PUPS — A. B. Van Blarico

FARM FOREMAN his wife alone, or twelve years old, a will be expected to extra hired help. W all food. Send part wages expected. P Shaver, Glen Dhu F

WANTED — GIRL work in town resid given; good home. Good wages. Summ with references. Box

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We are in the ma Twenty-five year You'll find it in o

ASK The figures of y for to-morrow. Ship to—

The Toro Church St.,

Mrs. Moriarty she has a warm a bors regard Nan member of the Michael or Kathl One fine morn running across th over her head, an what is the matt sick? I seen her of the house, and "The saints b replied Mrs. M sick"! She clim table last night and it made her s

The Staude Mak-A-Tractor

ONE of the 7,000 farms on which the Staude Mak-a-Tractor is used is The Lakeview Stock Farm at Bronte. Quoting from an article in the "Farm & Dairy" of March 7th, Mr. Dawson, the Manager of the Lakeview Farm, stated to the "Farm & Dairy" last fall:—

"It is working splendidly. It is drawing two 12-inch plows up and down the stiff grade behind the barn. You simply can't beat the quality of the plowing and it is a one-man operation—he is plowing about 5 acres a day. He doesn't have to stop for rain—just puts up the top of the car and goes ahead. My wife ran the plow and the car for half a day just for the novelty of it. We have been plowing with horses, two and three horses on the double-bottomed plow turned over just 3 1/2 acres a day. We had two single teams plowing in the same field and they turned over just 1 acre a day.

Heating? No, we haven't had any particular trouble. The machine has run 10 hours and never boiled the water in the radiator."

The Staude Mak-a-Tractor is a tractor attachment for use with the Ford car. Special honey-combed radiator, water circulator and multi-blade fan are installed and become part of the permanent equipment of the Ford car. The tractor attachment can be installed or taken off in a few minutes. Write for booklet.

THE ONTARIO AUTO-TRACTOR CO., Ltd.
157 Bay Street, Toronto, Ont.



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted and Pet Stock. TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

COLLIE PUPS—BRED FROM HEELERS. A. B. Van Blaricom, Morganston, Ont.

FARM FOREMAN WANTED—A MAN AND his wife alone, or with one daughter or son over twelve years old, as working foreman. The wife will be expected to do the house-keeping for the extra hired help. We supply furnished house and all food. Send particulars as to experience and wages expected. Position open immediately. A. Shaver, Glen Dhu Farm, Whitby, Ont.

WANTED—GIRL FOR GENERAL HOUSE-work in town residence. Small family; assistance given; good home. Every electrical convenience. Good wages. Summer cottage in Muskoka. Apply with references, Box 87, Hespeler, Ont.

CREAM

We are in the market for Churning Cream. Twenty-five years' experience should count. You'll find it in our service.

ASK FOR PRICES

The figures of yesterday may be too low for to-morrow. Ship to—

The Toronto Creamery
Church St., (It Pays) Toronto

Mrs. Moriarty owns a goat, for which she has a warm affection. All the neighbors regard Nanny as quite as much a member of the Moriarty family as is Michael or Kathleen.

One fine morning Mrs. Riordan came running across the street with her shawl over her head, and said, "Mrs. Moriarty, what is the matter wid Nanny? Is she sick? I seen her lanin' agin the corner of the house, and she was lookin' ill!" "The saints bless you, Mary Ann", replied Mrs. Moriarty, "Nanny ain't sick!" She climbed up on the cinter-table last night and ate the mistletoe, and it made her sintimintal, that's all!"

brothers and sisters, however. Indeed, she had scarcely time to get acquainted with them when one day a big man appeared, put her in a sack, and carried her away.

It was dark down in the bottom of that sack, and lonesome away from her mother. Soon she gave vent to her feelings in several loud wails, which seemed much too big to come from so small a kitten. But her journey was not so very long, and soon Molly found herself rolling out of the bag on to the floor of our house. I picked her up, saying, "Oh father, what a dear little kitten! It's to be mine, isn't it?"

Father said yes, and I was quite happy. I got some milk, and put it in a granite dish which was hereafter to belong to Molly. As Molly was hungry she did not hesitate about drinking all the milk she could, and when I put her in a nice, warm box, she cuddled up and soon went to sleep.

Did any of you ever see a kitten that didn't love to play? It seemed as if Molly had more than her share of high spirits, for she kept chasing her tail, fighting feathers and doing all manner of stunts which would put a skilled trapeze performer to shame. Everyone loved to watch her.

These were happy days, indeed. My brother and I found plenty of time to play with her, and there was nothing to fear from anyone. If I was reading, Molly would jump on my lap, turn on her back, and have a make-believe fight with my fingers. But she never became rough in her play—she was always gentle.

One day, however, it was evident that life was not going to be so peaceful as it promised, for my brother brought a dog to share the attentions that had heretofore all been shown to her. This dog was scarcely as old as herself, and he was quite a peaceful little black and white Collie. But the minute Molly saw him she arched up her tiny back, and spat at him with all her might. The pup barked at her, and came close to see what this furious little spitfire might be. Molly slapped his nose with her paw. He jumped back barking, and then rushed at her. She disappeared under the veranda. The pup searched for her, and barked loudly whenever he caught a glimpse of her. After this there wasn't much peace in the back-yard. Every time those two met there was a dispute over the right of way. Quite frequently the two got up on their hind legs and boxed each other. They were rather amusing to watch, as they were too small to hurt each other. But they certainly made quite a racket.

For about a week the war remained unsettled, but one morning mother called to me to come and look out of the window. There was the pup, quietly sleeping, his nose between his paws, and on his back Molly, also sleeping. I don't believe many of you have ever seen a cat sleeping on a dog's back, and it certainly did look funny. Hereafter the two were friends. Molly shared the pup's kennel, and when they slept she either got on his back or slept between his paws, his nose over her back.

Father had been complaining that the mice fairly infested the barn, but Molly soon grew to be such a fine mouser that those rodents which escaped sought more peaceful quarters, and she had to go to the fields when she wanted to find mice.

Molly had one fault—she was careless, and a careless cat has many dangers. One day when she was in the stables the cows came in. She didn't move out of the way quickly enough and one of the cows stepped on her poor little foot, severing three of the toes. With a shrill cry poor Molly ran away to a corner to lick the wounded foot. When I came in she limped towards me, crying pitifully, and holding out the foot. I washed it with an antiseptic and bandaged it up. When her foot got better she seemed to be continually getting in some scrape. She pushed her head through a mesh in a chicken wire fence, and couldn't get it out till I came along and cut the wire. She crawled through a hole in the foundation of the wood-shed, and what happened here I don't know. Anyhow, she couldn't get out, and we had to remove some of the stones in the foundation to let her out. She got into a fight with another cat, although she came off victor she lost a piece of one ear, and got a bad gash in one leg. After that she stayed home and left other cats alone.

Molly was always overjoyed when my

brother came home with a string of fish—she knew she would get her share. She was rather too fond of fish, though. One day the doors were all open, and she came into the house. The fishman had just been around and left some fish, and they were soaking in a pail of water. Before we came to the rescue she had finished one fish and part of another. You may be sure I saw that she got out of doors in a hurry. It was the last time she tried that trick, but possibly we were more careful.

One day she switched her tail too close to a mouse trap. It sprung shut, and before anyone could come to her rescue she lost the tip of that tail. So you see her scars were coming fast.

Unfortunately, she had not yet learned to be careful and keep out of danger. One morning father was going away with a heavy load of grain. As he drove out of the yard Molly ran under the wagon and stood there—the wheel passed over her body. Father heard her yell and stopped the horses, jumped down and ran around to see what was the matter. He was horrified when he saw what had happened. But the cat was quite alive, the wheel having passed over the part of the body containing few bones. Seeing that she would doubtless live, and being in a hurry, he called mother, who came and carried her into the wood-shed, and placed her on a soft, old coat. When mother told me what had happened, I couldn't believe that she was still alive until I saw her myself.

Yes, she lived. For a long time she couldn't use her hind limbs at all, but with her strong constitution, and the daily care she received, she finally recovered quite fully. They say that cats have nine lives. I don't know if that is true or not, but I think Molly must have lost one of them then.

The pup died when he was about a year old, and for a while Molly was very lonesome. Before long she seemed to forget, and then she hated all dogs worse than ever. Our neighbor has a young fox terrier. He often came over here, but Molly never happened to be around in time to see him. One day, however, I was sitting on the porch and Molly was beside me, her feet on my knee, purring peacefully. Suddenly the dog appeared around the corner of the house. Quicker than an arrow shot from a bow, that cat gave one long leap, and landed—no, not quite—on the dog's back. He never even waited to see what was the matter, but took to his heels, and never stopped running till he was safe at home. When she saw that he was not going to dispute her will, she turned and walked slowly and majestically back to her seat, growling deep down in her throat as if to say, "I'll show that dog that I'm boss around here! Grr! I'll show him!" And for a long time the dog never ventured farther than the gateway.

Molly will be eight years old this spring. She has grown wiser during these years, but she's as fond of play as ever. I am sending you her latest picture, taken with her youngest granddaughter, who looks very much like her. If any of you should happen out this way you would likely see her sitting in the sun, enjoying life peacefully.

[I am sorry the picture was not clear enough to publish, Lucile, but thank you for sending it.—Puck].

Mayor Curley of Boston, was joked about the pre-eminence of Irishmen in public life.

"That's perfectly true; we always get to the top," answered Mr. Curley. "An example of this came to my attention a few years ago, when I was making a trip through Minnesota. I came to a small town in the northern part of the state. One glance at the signs on the stores showed that Scandinavians predominated. Johnson, Nelson Gustavson, Hillberg, Olson and like names were all that I could see.

"Any Germans here?" I asked the man I was visitin.

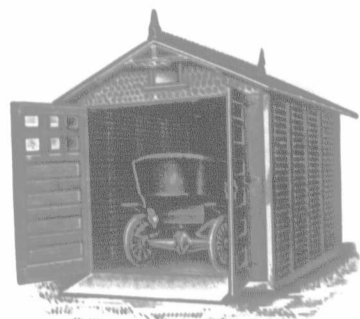
"There ban none," he said.

"Any Italians?"

"No," he answered.

"And no Irishmen either, I suppose?" I added.

"O yaas, there ban two Irishers in town," came the reply. "One he ban mayor and the other he ban chief of police."



EXPOSURE DESTROYS

Destruction means loss and failure. Why not avoid same? You have learned the value of protecting your Stock and Implements from the varying weather conditions.

If properly housed, your stock look better, take less feed and produce better results.

Your implements last longer, are ready for immediate use.

Why not house that car of yours under similar conditions in a SCHULTZ SECTIONAL GARAGE? It will last longer, look better, and be always handy, ready for use.

SCHULTZ GARAGES are built to protect and last—they are shipped complete, made in various sizes to suit any car. Send for catalogue.

Schultz Brothers Co. LIMITED
BRANTFORD, ONTARIO

Horses for Sale

A handsome 5-year-old Hackney Stallion and one 5-year-old Hackney Mare. Both high grade, registered stock, in perfect condition—a bargain for some one. Stock came to us through foreclosure.

J. E. Bartlett, Jackson, Mich.
Clydesdales for Sale

Pair of Registered Clydesdale Fillies, two years old, blacks, with white faces and white hind legs; well matched and sound; granddaughters of Baron's Pride.

WALTER MITCHELL
R.M.D. No. 2 Lindsay, Ont.
Long-distance 'phone.

SHERLOCK-MANNING
20th Century Piano

made in Canada—used in thousands of Canadian homes—and is generally acknowledged to be "Canada's Biggest Piano Value"

Write Dept. 18 for free catalogue "T." THE SHERLOCK-MANNING PIANO CO. London (No street address necessary) Canada.

"I hear you are thinking of buying a farm?"

"That's my intention," said the city man with a complacent air.

"Well, don't forget the importance of silos."

"Trust me for that, sir. By the way—er—do these things consume much gasoline?"

A Wee Bit Sane.—While a certain Scottish minister was conducting religious services in an asylum for the insane, one of the inmates cried out wildly: "I say, have we got to listen to this?"

The minister, surprised and confused, turned to the keeper and said: "Shall I stop speaking?"

The keeper replied: "No, no; gang along, gang along; that will not happen again. That man only has one lucid moment every seven years."

The Christian Herald.

THESE 16 CANADIAN HOLSTEIN COWS
Produced as much butter as 100 average cows.

941.25 Lbs. Posch Queen Wayne	1043.75 Lbs. Baroness Madoline	827.5 Lbs. Grace Pledge DeKol	1123.5 Lbs. Madam Posch Pauline	1048.75 Lbs. Oesta	1042.05 Lbs. May Echo
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1007.5 Lbs. Calamity Johanna Rig	1173.66 Lbs. Lady Pietje Canary's Jewel	1051.25 Lbs. Lillie DeKol Lucknow	1130.0 Lbs. Evergreen March		

"Well, I will tell," said Elliot, almost fiercely. "That man is Andrew Belton. He has come home after eighteen years of imprisonment, which have left him terribly weak in mind and body. Don't you think people will forgive him now?"

A swift vindictiveness flashed into the woman's face. "I don't know," said she. "Why in the world don't you know, Miss Daggett?"

Then the true reason for the woman's rancor was disclosed. It was a reason as old as the human race, a suspicion as old as the human race, which she voiced. "I have said from the first," she declared, "that nobody would come here, as that girl did, and do so much unless she had a motive."

Elliot stared at her. "Then you hate that poor child for trying to make up for the wrong her father did; and that, and not his wrongdoing, influences you?"

Miss Daggett stared at him. Her face slowly reddened. "I wouldn't put it that way," she said.

"What was would you put it?" demanded Elliot mercilessly. He was so furious that he forgot to hold the umbrella over Miss Daggett, and the rain drove in her hard, unhappy face. She did not seem to notice. She had led a poisoned life, in a narrow rut of existence, and toxic emotions had become as her native atmosphere of mind. Now she seemed to be about to breathe in a better air of humanity, and she choked under it.

"If—" she stammered, "that was—her reason, but I always felt—that nobody ever did such things without—as they used to say—an ax to grind."

"This seems to me a holy sort of ax," said Elliot grimly, "and one for which a Christian woman should certainly not fling stones."

They had reached the Daggett house. The woman stopped short. "You needn't think I'm going around talking, any more than you would," she said, and her voice snapped like a whip. She went up the steps, and Elliot went home, not knowing whether he had accomplished good or mischief.

Chapter XXI.

Much to Mrs. Solomon Black's astonishment, Wesley Elliot ate no dinner that day. It was his habit to come in from a morning's work with a healthy young appetite, keen-set for his beef and vegetables.

KEITH'S SEEDS FIFTY-TWO YEARS SERVICE

1866 1918

Take the Warning!

In view of the shortage of seeds the Government is warning farmers to kiss no time in ordering their seeds; also to buy carefully selected seeds only. Send us your order at once. If you have not received a copy of our catalogue, write today for one.

CORN		CLOVER AND TIMOTHY	
On account of the severe shortage of seed corn this year, practically none being obtainable from Canada, we will accept orders NOW for seed corn (shelled) Southern grown, subject to our receiving delivery from United States War Board. This corn is of excellent quality. One car has arrived and more to follow immediately. Order now.	Red Cob \$4.60	Government Standard Bushel \$21.00	
Early Prince Charlie 4.60	(Would do as a substitute for Wisconsin No. 7)	No. 1 Red Clover 16.50	
Leaming Improved 4.60		No. 2 Alaska, No. 1 for purity 15.50	
Leaming Fodder 4.60		Alfalfa, Ontario Variegated No. 2, almost No. 1 for purity 25.00	
Mammoth Southern 4.60		Sweet Clover, White Blossom 18.00	
80% Guaranteed Germination		No. 1 Timothy, extra No. 1 for purity 6.25	
Front paid on all orders of \$25 and over to Ontario and Quebec points.		No. 2 Timothy, extra No. 1 for purity 5.75	
We are in the market for 6-rowed and 2-rowed Barley, Marquis Wheat, Farmers Black Barley, Sweet Clover Rye Buckwheat, O. A. C. No. 3 Oats, Silver Hulled Buckwheat. Send samples.		No. 2 Timothy, No. 1 for purity 6.25	
We pay railway freight to all parts of Ontario and Quebec on orders of \$25 or more.		Kentucky Blue Grass 2lb. per lb. postpaid 35¢ per lb.	
Bags for Clover and Timothy, 45¢ extra. Bags for Grain free.		Marquis Spring Wheat (Ontario grown) 1.00	

GEO. KEITH & SONS SEEDS 124 KING ST. E TORONTO

Seed Beans

We have 74 bags of 100 lbs. each, hand picked white field beans for seed. Germination test from 84 to 94%. All screened over 1/4 inch screen and guaranteed perfect. We offer them at 20 cents per lb., f.o.b. Frankford.

Cory & Co., Frankford, Ontario

NO WAR PRICES ON THIS CLOTHES WASHER

\$1.75

Washes anything from finest laces to heaviest blankets or overalls equally well and without wear of feet, saves rubbing and washboard dragging, eye can be used for rinsing, bluing or dry cleaning.

SPECIAL OFFER

To give to every woman who orders the best Virginia Washers with motor, we will give every woman who orders the complete washer, who sends us postpaid \$1.75, a special gift. Satisfaction guaranteed, money refunded.

Grant & McMillan Co. Dept. M. B. Box 353 Toronto

He passed directly up to his room, although she called to him that dinner was ready. Finally she went upstairs and knocked smartly on his door.

"Dinner's ready, Mr. Elliot," she called out.

"I don't want any to-day, thank you, Mrs. Black," was his reply.

"You ain't sick?"

"Oh, no, only not hungry."

Mrs. Black was alarmed when, later in the afternoon, she heard the front door slam, and beheld from a front window Elliot striding down the street. The rain had ceased falling, and there were ragged holes in the low hanging clouds which revealed glimpses of dazzling blue.

"I do hope he ain't coming down with a fever or something," Mrs. Black said aloud. Then she saw Mrs. Deacon Whittle, Lois Daggett, Mrs. Fulson, and the wife of the postmaster approaching her house in the opposite direction. All appeared flushed and agitated, and Mrs. Black hastened to open her door, as she saw them hurrying up her wet gravel path.

"Is the minister home?" demanded Lois Daggett breathlessly. "I want he should come right down here and tell you what he told me this noon. Abby Daggett seems to think I made it up out of whole cloth. Don't deny it, Abby. You know very well you said—I spouse of course he's told you, Mrs. Black."

"Mr. Elliot has gone out," said Mrs. Black rather coldly.

"Where's he gone?" demanded Lois.

Mrs. Black was being devoured with curiosity; still she felt vaguely repelled.

"Ladies," she said, her air of reserve deepening. "I don't know what you are talking about, but Mr. Elliot didn't eat any dinner, and he is either sick or troubled in his mind."

"There! Now you can all see from that!" triumphed Lois Daggett.

Mrs. Deacon Whittle and Mrs. Judge Fulson gazed incredulously at Mrs. Solomon Black, then at one another.

Abby Daggett, the soft round of her beautiful, kind face flushed and tremulous, murmured: "Poor man—poor man!"

Mrs. Solomon Black with a masterly gesture headed the women toward her parlor, where a fire was burning in a splendidly nicked stove full five feet high.

"Now," said she; "we'll talk this over, whatever it is."

To be continued.

POULTRY AND EGGS

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

AMERICA'S GREATEST WINNING, MARVELOUS egg-producing Indian Runner ducks. Eggs one-fifty the setting; also drakes. L. Murray, Harrow, Ont.

AFRICAN GESE INDIAN RUNNER AND Muscovy ducks, Barred Rocks, Rhode Island Reds, Black Spanish, Guinness, Campines, Hamburgs, Wyandottes. Eggs only. Mating list free. John Anneser, Tilbury, Ont.

BARRED ROCK AND RHODE ISLAND RED cockerels, Indian Runner drakes. Special price to close them out. John Anneser, Tilbury, Ont.

BARRED ROCK EGGS—O. A. C. STRAIN. Two dollars per fifteen. J. Acres, Thornbury.

BRED TO LAY A FULL BASKET OF EGGS. Try a few settings of my Single-Comb White Leghorns, \$2-15 eggs, \$3-30 eggs, \$8-100 eggs, David G. Houston, 52 Ellsworth Ave., Toronto, Ont.

BRED TO LAY WHITE WYANDOTTES. Eggs during hatching season, \$2.50 per 15. Hugh A. Carmichael, R. R. No. 1, Erin, Ontario.

BARRED ROCKS—PURE-BRED, GRAND laying strain; \$1.50 per 15 eggs, \$3.75 per 45. L. S. Cressman, Hillcrest Farm, R. R. 1, New Hamburg, Ont.

BRED-TO-LAY BARRED ROCK EGGS FOR hatching—the big, healthy kind that have free range. Should hatch well. Eggs \$2 per 13, \$5 per 50. Biggar Bros., Oakville, Ont.

BRONZE TURKEYS—SELECTED FOR SIZE and vigor. Eggs \$5 per 9; also eggs from White and Barred Rocks, Brown Leghorns and Rouen ducks. J. H. Rutherford, Albion, Ont.

BARRED PLYMOUTH ROCKS—200 EGG line. Champion Guelph winners; write for circular. Eggs \$2.00 per 15. Jno. Fenn, Plattsville, Ontario.

BLACK MINORCA EGGS—BOTH COMBS, two dollars for fifteen; good layers. Write: Fred. Reekie, Camperdown, Ont.

BEULAH FARM WHITE WYANDOTTES—Winners at the principal egg-laying competitions. Official records over 200 eggs. Hatching eggs from two-fifty per setting. Mating list free. McLeod Bros., Box A, Stoney Creek, Ont.

CANADIAN RINGLET BARRED ROCKS; trapped, heavy winter laying strain. Eggs, \$2.00 setting, guaranteed. F. Coldham, Box 12, Kingston, Ont.

DAY-OLD CHICKS—EGGS FOR HATCHING, from trap-nested, bred-to-lay S.-C. White Leghorns, White Wyandottes and Barred Rocks. Write for mating list. Brockville Poultry Farm & Hatchery, Brockville, Ont.

EGGS—PER HUNDRED OR SETTING—nearly all varieties—exhibition, utility poultry, ducks, bantams, geese, turkeys, baby chicks—reasonable prices. Twenty years breeders—exhibitors. Luxton & Sons, Mt. Forest, Ontario.

EGGS FROM PURE-BRED BARRED ROCKS and White Wyandottes. Pullets have laid continuously since November; \$2 per 15, \$3 per 30. Express prepaid. R. Murray, Norval.

"FAIRVIEW" S.-C. BROWN LEGHORNS. Eggs \$1 per 15. Wn. Bunn, Denfield, Ont.

GOLDEN AND SILVER WYANDOTTES. Good Silver cock for sale. Eggs from both varieties—three dollars setting of fifteen, two settings for five dollars. From winning stock. Peter Daley, Box 12, Seaforth, Ont.

HATCHING EGGS—BABY CHICKS—UTILITY laying strains. Eggs \$1.50 per setting. Barred Rocks, Rhode Island Reds, White Leghorns, White Wyandottes, Golden Wyandottes, White Rocks, Non-Bearded Golden Polish. Write for price list. Satisfaction guaranteed. Tay Poultry Farm, Perth, Ont.

HATCHING EGGS FROM PRIZE-WINNING stock. It pays to get the best, and that is what I have. Winners from nineteen Ontario Shows. Barred Rocks, Dark Cornish, Partridge Wyandotte, Buff and White Orpingtons and White Crested Black Polish, three dollars per setting. A beautiful Single-Comb White Leghorn Cockerel, five dollars. Three White Orpington hens and cock—a grand pen—eighteen dollars. Douglas Wark, Picton, Ontario.

MAMMOTH BRONZE TURKEYS—NO breeders left to sell this spring. I am brooding orders for eggs at five dollars per nine eggs. Sixteen good females, mated to my first-prize year-old tom and first and second-prize young toms, Guelph, 1917. My customers get the benefit of my best birds when buying eggs. Geo. Neil, Tara, Ont.

PLYMOUTH ROCK EGGS—O. A. C. LAYING strain; \$1.50 per setting. Mrs. Berry, 52 Queen's St., Guelph, Ont.

ROSE-COMB RHODE ISLAND REDS, Martins, White Wyandottes, 220-egg strains, 15 eggs \$1.50; Special pen Reds, \$3 15 eggs. Wesley Shanklin, Ilderton.

R.-C. BROWN LEGHORNS—LOOKI SPECIAL sale. Now is the time to invest in good selected laying stock. Trios of 1 cockerel, 2 females, \$10. We must have the room for our young chicks. Eggs \$3 per 15. Galloway & English, Ingersoll, Ont.

S.-C. RHODE ISLAND WHITES THAT HAVE the habit of laying when egg prices are high. Also have strong standard points. Eggs, two and three dollars per fifteen. "White" Poultry, Yards, Box 296, Preston, Ont.

TWENTY-FIVE YEARS A BREEDER OF Barred Rocks that are barred and bred right, and from first-class laying hens. Eggs \$3 for 15, \$8 for 50, \$15 per 100. Order direct from this advt. Satisfaction guaranteed. Walter Bennett, R.R. 1, Cottam, Ont.

TURKEY EGGS—WE HAVE 50 HEALTHY Bronze Turkey Hens, mated to strong, husky, young and old toms; eggs ready in season at \$4 per 10 eggs; few toms left. Send in your order, we have the eggs ready for you. Everything in pure bred poultry—write us first. We want your surplus of eggs and baby chicks. Stamps highly appreciated. Yamaska Poultry Farms, St. Hyacinthe, Quebec.

WINNERS—SILVER CUPS, GOLD MEDAL—Eggs, Single-Comb White Leghorns, \$1.50 and \$3 setting; Barred Rocks, \$1.50. Nine chicks guaranteed. H. Beracht, Caledonia, Ont.

WHITE WYANDOTTES; IMPORTED, bred-to-lay. Cocks dams' records over two hundred eggs per year. Barred Rocks, bred-to-lay, excellent layers. Prices—eggs, chicks on application. A. W. Hamilton, Parkhill, Ontario.

The Dollar Chain

For the soldiers and all who are suffering because of the war. Contributions from March 22 to March 29: John A. Ellis, Moorefield, Ont., \$3.50; "Burnstown," Ont., \$2; Mrs. J. Y., Rocklyn, Ont., \$1; Wallaceburg Women's Institute, per Mrs. Courtis, \$10; Ladies Aid of Wheeler, R. 1, Bridgen, Ont., per Mrs. S. Wheeler, \$25.90. Previously acknowledged.....\$5,350.40 Total to March 29.....\$5,392.80 Kindly address contributions to "The Farmer's Advocate and Home Magazine," London, Ont.

Markets

(Continued from Page 592) during the week, and finest September and October mixed were still quoted at 48 1/2c. to 49c., with fine quality 1c. under. Some limited sales of these qualities as well as of fine creamery took place at better than 50c., but current receipts were generally from 46c. to 47c., dairies being 40c. to 41 1/2c.

Grain.—The market for oats was holding firm, with No. 3 Canadian Western and extra-No. 1 feed, selling at \$1.07 1/2 per bushel; No. 2 feed, \$1.06 3/4; tough No. 1 feed, \$1.06; No. 2 feed, \$1.03; tough No. 2 feed \$1.02; Ontario No. 2 white, \$1.07; No. 3 white \$1.04 1/2, and No. 4 \$1.03 per bushel, ex-store.

Flour.—Car lots of Manitoba spring wheat, Government Standard, were quoted at \$11.20 per barrel, in bags, f.o.b., Montreal, and 10c. was added when delivered to city bakers. Ontario winter wheat flour was in moderate demand, and prices were steady at \$11.40 to \$11.50 per barrel, in bags. Rye flour was quite firm at \$7.20 per bag.

Millfeed.—Bran and shorts were 40c. higher, at \$35.40 to \$40.40 respectively, per ton, in bags. Pure grain mouille sold at \$73 in car lots, and at \$75 in broken lots, while mixed mouille was \$60 to \$63 per ton. Oat seed was quoted at \$33 to \$36 per ton.

Hay.—The market was steady at \$17 per ton for No. 2 hay; \$15.50 for No. 3; and \$12 to \$14 for clover mixed, per ton, ex-track.

Hides.—The quality of hides was depreciating, and steers declined to 18c., cows being 13c. and bulls 12c. per lb., flat, and 15c., 16c. and 17c. Montreal inspection. Veal skins were up to 36c. and 38c. Spring lambs 35c.; sheep skins \$4.50 to \$4.60; horsehides \$5 to \$6. Tallow 3 1/4c. for scrap fat; 8c. for abattoir fat; 15c. to 16 1/2c. for rendered tallow.

Sale Dates. April 4, 1918.—Jas. A. Caldwell, Lot 20, Con. 3, Oro, near Barrie-Clydesdales Shorthorns, Cotswolds, Yorkshires. April 5, 1918.—Dunrobin Farms, Beaverton, Ont.—Holsteins. April 10, 1918.—T. G. Gregg, R. 5, Ingersoll, Ont.—Holsteins. May 15, 1918.—York County Holstein Breeders' Club, Richmond Hill, Ont. June 11, 1918.—Dr. A. A. Farewell, Oshawa, Ont.—Holsteins.

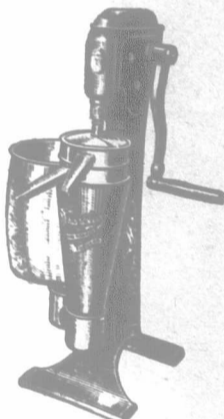
Every Little Bit Added to What You've Got Makes Just a Little Bit More

The "Little Bits" have been the foundations for most of the big fortunes of North America. Your "little bit" is right in that stream of skim milk that is carrying a goodly percentage of "skimmable" cream with it if any fixed-feed separator is being used.

Every little bit is saved and is turned into money by using a

SHARPLES SUCTION-FEED CREAM SEPARATOR

The reason for the saving is simple—the Sharples skims clean at any speed. Other separators do not—their construction prevents it. Only the Sharples has the suction-feed principle that draws the milk into the separating bowl in proper proportion to the speed of turning. No cream loss from slow turning—no bell-ringing bugaboo: just complete, uniform separation—that's the Sharples way. Any other way is wasteful. No discs in the Sharples—that means easy, quick cleaning. More than a million users are saving with a Sharples.



Write for catalog today; address Dept. 78 TORONTO, ONT. The Sharples Separator Co. REGINA, SASK. The Mitchell & McGregor Hardware Co., Brandon, Man. Distributors for Manitoba

The Cable Bands Ensure Rigidity—Full or Empty. Iron rods make unsatisfactory hoops. They can't expand and they are hard to put on. Our patented, seven strand, steel cable bands, with cast steel couplings, stretch or contract, as the silo is full or empty. They are easily put on and make the perfect silo hoop. Only No. 1 Norway Pine is good enough for Burlington Cable Band. The staves are 2 inches thick and matched at both sides and ends. All staves are treated with a wood preservative and red, waterproof paint, making the silo vermin-proof, airtight and waterproof. Burlington Cable Band Silos Keep Ensilage as a Perfect Fodder. One of the reasons why is the use of the refrigerator door system in Burlington Silos. Being smooth on the inside, no air-pockets can form around the doors. Double bevel at the sides and battened on the outside, they fit perfectly and are air-tight. All doors are interchangeable. A Burlington Silo will keep your ensilage sweet and good to the last forkful. Your cows will eat every bit of it greedily and keep sleek and trim on it. Buy Direct—Save Money. Everything supplied complete. No extras. It means a big saving. Write for price list. THE NICHOLSON LUMBER CO., Ltd. Burlington, Ont.

WOODRIGHT WHITE WYANDOTTES—Bred for laying. Hatching eggs \$1.50 per 15. Wainwright & Woodcock, Seagrave, Ont. 50,000 HATCHING EGGS FROM HIGH CLASS strains of bred-to-lay stock. Single Comb White Leghorns, White Wyandottes, Barred and White Plymouth Rocks. Eggs \$1.50 per 15, \$7 and \$8 per 100. Limited number of baby chicks. Send for circular. C. E. Smith, Scotland, Ont. Rose-Comb Rhode Island Reds and Barred Rock eggs for hatching, \$1.50 per 15. Rose-Comb Rhode Island Red cockerels \$3 each. Alex. McKinney, R.R. No. 1, Erin, Ontario. Choice Eggs for hatching from free range flocks—S.-C. White Leghorns (Barron's 282-egg strain), Bred-to-lay S.-C. Brown Leghorns (O. A. C. and Guild strains), Barred Rocks—\$2 per 15, \$10 per 100. Fawn I. R. Duck eggs, \$3 per 10; Mammoth Bronze Turkey eggs, \$5 per 9 (show stock). Also choice Yorkshire Hogs, all ages. T. A. KING, Milton, Ont. Single-Comb White Leghorns Hatching eggs from heavy winter layers; \$1.50 for 15, \$6.00 per hundred. CROSSHILL POULTRY FARM Box 664 Cobourg, Ontario.

J. B. Ross, of M... he has recently m... good Ayrshire sales... ment in the "Ad... ville. Two bulls a... purchased by J. I... bull went to J. R. I... shipped to Manito... Lyndhurst, secured... J. K. Featherston... Yorkshires have be... parts of the Provin...

The Hawthorn... Stockmen in rev... advertising column... note the offering a... Mann, of "The H... Ont. Shorthorn ca... Cotswold sheep an... all specialties, and i... ing purchasers will... thing that is worth... at present there is... young bulls, includ... ped and milking st... good-breeding cows... Fisher-Roan familie... present senior sire i... a Duchess of Gloste... In Clydesdales the... mares are once mo... all to the service... horse, Hisington G... lb. son of the note... one of the most y... service in the dist... are headed by the... ram No. 302, and t... Featherston-bred b... noted prize winner i... famous sire Longfel... is a very limited... wolds, but a choic... and both sexes can... shires at most all t...

Some Go... EDITOR "THE FARM... Here are two dair... that are worth ca... herd in the neighbor... Ont., had an avera... milk and 281 lbs. ... 1916 of 4,097 lbs. ... or considerably mor... This is attributed to... care and better feed... as much milk as tw... year before, simply... and cared for. The second herd... average of 11,218 lb... fat; the increase is... and 199 lbs. fat in ... This is the result o... an A-1 sire. One ... 1915 gave 8,817 lbs... record was over 19... a high standing at... Fair. Herd record... results. It will evidently... what cows are doing... what they can be i... write to the Dairy... record forms, they a... satisfaction and bett... proved cows. Test... cow pay.

A wild-eyed, dishe... burst into the local... husband has been r... days. I want you... dragged." "If we should find... anything peculiar ab... can be recognized?"... tor. The woman hesitat... loss for a minute. T... slowly overspread her... "Why, yes!" she... "he's dead!" "I see you have yo... said the inquisitive... isn't it?" "Yes, sir," respon... senger. "Meet with an acci... "No; broke it while... self on the back." "Great Scott! Wh... "For minding my o...

Gossip.

J. B. Ross, of Meadowvale, writes that he has recently made a number of very good Ayrshire sales through his advertisement in the "Advocate." A cow and bull were sold to J. G. Stancell, of Stafforville. Two bulls and three heifers were purchased by J. Pearson, of Dixie; one bull went to J. R. Fallis, Brampton, to be shipped to Manitoba. Shipley Bros., of Lyndhurst, secured one choice bull, and J. K. Featherstone purchased a cow. Yorkshires have been shipped to different parts of the Province.

The Hawthorns' 1918 Offering.

Stockmen in reviewing the live-stock advertising columns of this issue should note the offering announced by Allan B. Mann, of "The Hawthorns," Peterboro, Ont. Shorthorn cattle, Clydesdale horses, Cotswold sheep and Yorkshire swine are all specialties, and in each division intending purchasers will, at all times, find something that is worth while. In Shorthorns, at present there is an offering of several young bulls, including both Scotch topped and milking strains from the herd's good-breeding cows of Beauty, Lavinia and Fisher-Roan families. Several are by the present senior sire in service, Royal Choice, a Duchess of Gloster bull by Royal Chief. In Clydesdales the usual lot of breeding mares are once more seen heavy in foal, all to the service of the present stock horse, Hislington Glory (imp.), a big 2,100-lb. son of the noted sire Gold Mine, and one of the most popular sires ever in service in the district. The Cotswolds are headed by the imported Calder-bred ram No. 302, and the Yorkshires by the Featherston-bred boar Pine Grove Sam, a noted prize winner in the past, sired by the famous sire Longfellow No. 38416. There is a very limited offering in the Cotswolds, but a choice lot of various ages and both sexes can be furnished in Yorkshires at most all times.

Some Good Results.

EDITOR "THE FARMER'S ADVOCATE":
Here are two dairy herd records in 1917 that are worth careful note. First, a herd in the neighborhood of Oxford Mills, Ont., had an average yield of 9,008 lbs. milk and 281 lbs. fat, an increase from 1916 of 4,097 lbs. milk and 114 lbs. fat; or considerably more than twice as much. This is attributed to weeding out, better care and better feed. One cow produced as much milk as two of the best cows the year before, simply by being better fed and cared for.

The second herd, six cows, gave an average of 11,218 lbs. milk and 369 lbs. fat; the increase is from 6,338 lbs. milk and 199 lbs. fat in 1915, or nearly double. This is the result of feed and care and an A-1 sire. One cow in this herd in 1915 gave 8,817 lbs. milk, and in 1916 her record was over 19,000 pounds; she took a high standing at the Ottawa Winter Fair. Herd record work leads to good results.

It will evidently pay to keep track of what cows are doing now, and note then what they can be induced to do. Just write to the Dairy Division for milk record forms, they are free, and get full satisfaction and better returns from improved cows. Test the herd, make each cow pay.
C. F. W.

A wild-eyed, disheveled-looking woman burst into the local police station. "My husband has been missing now for two days. I want you to have the canal dragged."

"If we should find the body, is there anything peculiar about him by which he can be recognized?" inquired the inspector.

The woman hesitated, and seemed at a loss for a minute. Then a look of relief slowly overspread her face.

"Why, yes!" she exclaimed, at last, "he's dead!"

"I see you have your arm in a sling," said the inquisitive passenger. Broken, isn't it?"

"Yes, sir," responded the other passenger.

"Meet with an accident?"

"No; broke it while trying to pat myself on the back."

"Great Scott! What for?"

"For minding my own business."

EDWARDSBURG
GLUTEN FEED

The feed that means more milk and richer milk. Write for prices.

The Canada Starch Co. Ltd.
TORONTO Fort William
Cardinal Brantford

Guaranteed
23% PROTEIN

Clover Seeds
(Government Standard)

	Per bus.
No. 1 Red Clover.....	\$24.00
No. 2 Red Clover.....	23.00
No. 1 Alsike.....	16.50
No. 2 Alsike.....	15.50
No. 1 Northern-grown Alfalfa.....	17.00
Ontario Variegated Alfalfa No. 2.....	24.00
No. 2 Timothy. (This seed grades No. 1 for purity.....)	5.50
No. 3 Timothy.....	5.00
Mixed Timothy and Alsike.....	9.00
White Blossom Sweet Clover.....	18.00
O. A. C. No. 72 Oats.....	1.50
Marquis Spring Wheat.....	3.25
O. A. C. No. 21 Barley.....	2.25
Canadian Beauty Peas.....	5.50
Golden Vine Peas.....	5.00
White Seed Beans.....	10.00

Terms:—Cash with order. Bags extra, at 45c. each.

On all orders, East of Manitoba, of \$25.00 or over we will pay the freight.

We guarantee seeds to satisfy or ship back at our expense.

Ask for samples if necessary.

TODD & COOK
Seed Merchants
Stouffville Ontario

IT DOES MAKE A DIFFERENCE
WHICH COMPANY YOU INSURE IN

If making an investment in real estate or anything else, care is—or should always be—taken to secure property that has a reasonable chance of increasing in value, and giving a good return for the investment.

This same care should be taken in placing Life Insurance, to see that the premiums are invested in such a manner that they give the best possible return to the insured.

It does make a difference which company you insure in.

Enquire for information and rates at your own age.

THE GREAT - WEST LIFE ASSURANCE COMPANY
Dept. Z Head Office: WINNIPEG



How Long Does a PAGE Fence Last?

WHEN it comes to choosing the wire fence that is to protect your farm, be guided by the experience of most of your careful neighbors.

You will find that Page Fences have been the choice of most of them.

Why do they place so much confidence in Page Fence? Because they know it lasts. They may have seen some of the Page Fences we made over 25 years ago, still up and giving good service.

That is the greatest argument in favor of your buying Page Fence to-day. From the time you put up your Page Fence, you will have no further fence troubles, or fence expenses.

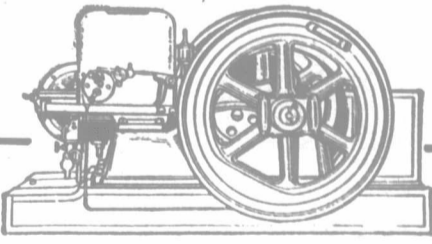
**PAGE FENCES
ARE BUILT TO LAST!**

They will withstand the heaviest bunts your cattle can give them. They will remain taut for your lifetime. The wires that enter into Page Fences are guaranteed **actual** No. 9 gauge wire. They are given an extra coat of galvanizing, to afford double resistance against rust and wear.

Page Gates, like Page Fences, are strong, durable and safe. They are products of good, honest value. Page Fence and Page Gates are the safest field protection you can secure.

Let us tell you more about them. Write our nearest branch for price list and catalogue. The Page Line of Fences includes a fence and a gate for every purpose.

Note that we allow freight on all Page orders of 200 pounds, or over, to any place in Old Ontario and Quebec, provided payment is made within 30 days.



The Powerful Page

Let the powerful, sturdy little Page Engine help you through your work. Hired help is scarce, inexperienced and high-priced, but a Page Engine is profitable and inexpensive help that never tires.

Let it pump the water for you, fill the silo, hoist the hay and grain to your mow, run the wood saw and ensilage cutter and threshing machine. Put a Governor pulley on it and it will turn your churn and run your cream separator at the same time.

We make Page Farm Engines in two types—one burning gasoline, the other kerosene (or gasoline)—and in five sizes, from 1½ h.p. to 7 h.p.

Drop us a card, asking for all information about them. It is a fact, that a Page Engine is the cheapest, most satisfactory kind of power that any farmer or dairyman can employ.



THE PAGE WIRE FENCE COMPANY
LIMITED
517 Notre Dame Street West, MONTREAL
WALKERVILLE WINNIPEG

PINE TREE BRAND



**Pine Tree Brand
TIMOTHY
SEED**

GRADE NO. 2
PURITY NO. 1 AND EXTRA NO. 1

If your dealer cannot supply you, write
The Albert Dickinson Co.
SEED MERCHANTS
CHICAGO, U.S.A. Established 1855

SEED GRAINS

We can supply, on short notice, limited quantities of **Choice, High-Quality Field Grains** from the following varieties:

Marquis Wheat, Goose Wheat, O.A.C. No. 21 Barley, Bunker King Oats, O.A.C. No. 72 Oats, Silver Hull Buckwheat, Centennial Peas

Also Highest Grades of Clovers and Timothy

Ask for our prices on Mangels, Turnips, Onions, Potatoes, Beets, Corn and garden seeds of all kinds.

If in need of feeds, write us. We can supply Cotton Seed Meal, Lined Oil Cake Meal, Corn Oil Cake Meal, Gluten Feed (23% Protein), Bran, Shorts, Corn, Cracked Corn, Corn Meal, Re-Cleaned Standard Screenings, Ground Screenings, Beef and Bone Scrap, Poultry Grit, Oyster Shell, Alfalfa Meal etc.

We manufacture the well-known "Good Luck" Brands of Poultry Feeds and can supply any quantity. Try our Good Luck Baby Chick Feed. It gives results.

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CRAMPSEY & KELLY
Dovercourt Road, Toronto, Ont.

LIFT YOUR CORNS OFF WITH FINGERS

Tells How to Loosen a Tender Corn or Callus so it Lifts Out Without Pain.

A noted Cincinnati chemist discovered a new ether compound and called it **Freezone**, and it now can be had in tiny bottles as hereshown for a few cents from any drug store.

You simply apply a few drops of Freezone upon a tender corn or painful callus and instantly the soreness disappears, then shortly you will find the corn or callus so loose that you can just lift it off with the fingers.

No pain, not a bit of soreness, either when applying Freezone or afterward, and it doesn't even irritate the skin.

Hard corns, soft corns, or corns between the toes, also toughened calluses, just shrivel up and lift off so easy. It is wonderful! Seems magical! It works like a charm! Your druggist has Freezone. Ask him!



Questions and Answers. Miscellaneous.

Feeds for Hogs.

1. Which would you prefer feeding hogs that are confined to a pen, rye and oat chop, or rye and shorts, and in what proportion?

2. To where would a person write to have pigs registered?

3. How nearly pure-bred would a sow have to be before she could be registered?

M. A. P.

Ans.—1. Rye meal compares favorably with barley meal as a feed for swine. Shorts is a feed which is highly recommended for pigs. Oats is also an excellent feed, but there is the objection of too many hulls unless they are finely ground. The proportions in which to feed the rye and oats or rye and shorts will depend somewhat on the age of the pigs. We would not care to feed young pigs too heavily on rye, but the amount could be increased until they were getting 50 to 60 per cent. rye for finishing.

2. If you have the registration number of the sire and dam you could have the pigs registered by writing John W. Brant, Accountant National Live Stock Records, Ottawa.

3. A sow must be registered before her progeny can be registered.

Silo for Small Herd.

1. What size of silo would you advise me to build to feed four head of cattle for twelve months?

2. How many acres of corn would I require to fill the silo?

3. Is silage good feed for brood sows and horses?

A. D. F.

Ans.—1. It would not take a very large silo to hold sufficient feed to feed four cows the entire year. It is scarcely practicable to build a silo less than 10 feet in diameter, although some have built them as small as 8 feet, and they should be 25 or 30 feet in depth. The greater the depth, the more firmly the silage goes together and the less the waste. A mature animal could be fed 30 to 35 lbs. of silage per day. This would mean that about 125 lbs. would be taken off each day for twelve months. This would mean about 23 tons for the year, at this rate of feeding. A silo 10 by 30 feet would hold approximately 47 tons. Thus it will be seen that one 10 by 30 will hold almost double what you would require. An 8-foot silo would be large enough for your herd.

2. It would depend on what kind of a crop you got. Three acres of an 8-ton-to-the-acre crop would give you about all you would require, and it would about half fill a 10 by 30-foot silo.

3. One must be very careful in feeding silage to horses. Brood sows do very well on it.

Re-foresting—Hot-bed.

1. Are beans cross-pollinating?
2. Does the Government supply trees for re-foresting purposes free of charge?
3. How is a hot-bed constructed?

S. M.

Ans.—1. We understand that beans do not cross-fertilize.

2. Certain varieties of trees may be secured from the Forestry Department, Parliament Buildings, Toronto. There is no charge other than paying the express on the trees.

3. In constructing a hot-bed it is necessary to build a frame the size required and have the top arranged so that the glass will slope to the south. This means that the back of the frame, which is to the north, will be eight or ten inches higher than the south side of the frame. It is well to excavate a little of the earth and then put in about ten or twelve inches of manure which will heat readily. Four or five inches of leaf-mould or compost is put on top of this. It is also advisable to bank around the frame with manure. The heating manure in the frame generates heat to force growth. After the seeds have germinated, it will be necessary to provide sufficient ventilation in order to prevent the trouble known as "damping off." This may be done by raising the sash a little. During the middle of the day when the sun is shining brightly it might be advisable to cover the sash with cotton. Care must be taken to give the plants sufficient moisture and yet not overdo it.



Raise your
Chicks on
Pan-a-ce-a.

Avoid
Gapes, Indigestion, Leg
Weakness and Their
Little Bowel Troubles.

**DR. HESS
POULTRY
PAN-A-GE-A**

Makes Chicks Healthy. The Best Safeguard
Against Little Chick Ailments

Your great problem is not how to hatch chicks, but to raise them after they are hatched. You would like to avoid the distressing losses of the first few weeks. Here's the best advice I can give you: Feed chicks Pan-a-ce-a to keep their general health good. Remember that disease takes the weak, not the strong and vigorous.

LISTEN TO THIS: There's a dealer in your town that will supply you with Dr. Hess Poultry Pan-a-ce-a, sufficient for your flock—it's to keep your chicks healthy; it's to prevent gapes and cure the gapey ones—it's to prevent and cure leg weakness—it's to prevent and cure indigestion—it's to regulate the bowel troubles. Guaranteed.

If you want early broilers and pullets that will develop into early winter layers, then feed Pan-a-ce-a. Packages, 35c, 85c and \$1.75. 25-lb. pail, \$3.50.

DR. HESS & CLARK, Ashland, Ohio

DR. HESS STOCK TONIC
Keeps Pigs Healthy and Thrifty Drives Out the Worms

Dr. Hess Instant Louse Killer Kills Lice

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If you intend planting Apple Trees or any Nursery Stock this spring, be particular as to the kind you get and be sure they are grown right, are healthy and clean, and backed by a reliable, dependable company.

PLANT E. D. SMITH'S TREES

They cost no more than inferior, poorly-grown trees and they are all inspected by Government inspectors!

If you are unfamiliar with the best varieties for your section, we will be glad to assist you in your selection, and such assistance places no one under any obligation to purchase. We have nearly 800 acres devoted to Nursery Stock and Orcharding, and can supply first-class stock of the following selected and inspected trees.

APPLE, PLUM, PEAR, CHERRY, QUINCE, PEACH, APRICOT, SMALL FRUITS, GRAPE VINES, ORNAMENTAL TREES, SHRUBS, CLIMBING VINES, HERBACEOUS PERENNIAL ROOTS, ETC.

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For full particulars as to terms, regulations and settlers' rates, write to:
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HON. G. H. FERGUSON, Minister of Lands, Forests and Mines.

The Situ Farm

EDITOR "THE FA

The great cry of reduction, but some get that for a far more than it is worth on it accordingly. wider machinery considerably; but farmers are using best machinery that is able to buy and obtainable. It takes a-days to equip a farm with machinery on the

Just now the price to tap every man enough to tap, yes two sides, and even written in one article. Now, what there is no help take care of it? here have equipped they have all the chores to say no. They know sugar can they do? The man can do. In a number of farms make of manure and spread there harrow and prepare as soon as the ground papers say haul the and spread as certainly is an advantage one's buildings are venient to do so. around here are old many years ago.

in such a manner to haul the manure but it must be hired man is soon another place as large sugar orchards men to carry it or not go near it, which is improbable had. We can until haying by such as keeping few acreage of cultivation down on some other lessening production always had one or two, especially for is by no means a not able to do heavy possible for two tons of hay and grain, a of barns.

This is only one A number of farms anxious to sell out. One man has offered money to a certain him a customer for farms near here a person's hands, to one of these two

worked at all if not. They say "put the the fields to work." In the first place, do in the house, physically able to length of time? It bodied man to do successfully. Another expect men to their own free will. They have short hours than farmers are. In most cases, an opposite position men are continual the cities instead of

The city business turer is able to pay he can raise the price accordingly, where take whatever he what it costs to now are able to make a few years ago, margin between the and the selling price

We recently sold a paid \$24 for them. This leaves about \$3 not keep a feed account \$100 would more than and the care that not do that four or shows that all farms. They are willing to even more than real for it is in their interest.

A lot of what I have pessimistic, but it

The Situation as the Farmer Sees it.

EDITOR "THE FARMER'S ADVOCATE":

The great cry of the day is greater production, but somehow, they seem to forget that for a farm to produce more requires that more labor must be expended on it accordingly. True, better methods, wider machinery and more of it, help considerably; but I think, as a rule, the farmers are using the best methods and best machinery that they are financially able to buy and with the hired help obtainable. It takes a small fortune now-a-days to equip a farm with all the modern machinery on the market.

Just now the papers are urging farmers to tap every maple tree that is large enough to tap, yes, and even tap some on two sides, and even three sides, as I saw written in one article in a paper the other day. Now, what is the use of all this if there is no help to gather the sap and take care of it? Most farmers around here have equipped sugar orchards, but they have all they can do to do their chores to say nothing about sugaring. They know sugar is very scarce, but what can they do? There is a limit to what a man can do. In the sugar season here a number of farmers have their winter's make of manure to haul into the fields and spread thereby enabling them to harrow and prepare their ground for seed as soon as the ground is fit for it. The papers say haul the manure to the fields and spread as soon as made. This certainly is an admirably plan, providing one's buildings are made so as to be convenient to do so. A lot of the barns around here are old-fashioned barns, built many years ago. The stables are planned in such a manner that it is not practical to haul the manure to the field every day, but it must be left until spring. Our hired man is soon leaving us to go on to another place as manager. We have a large sugar orchard, it takes two extra men to carry it on. This year we shall not go near it, unless we have a man, which is improbable, as there is none to be had. We can get along somehow until haying by cutting down the work, such as keeping few cows, raising a smaller acreage of cultivated crops and cutting down on some other such work, thereby lessening production. In haying we have always had one man and most always two, especially for last half. My father is by no means a young man and he is not able to do heavy work; also, it is impossible for two to mow away last half of hay and grain, as it has to go into top of barns.

This is only one case out of dozens. A number of farmers around here are very anxious to sell out for the same reason. One man has offered quite a sum of money to a certain person if he will find him a customer for his farm. Two more farms near here are put into the same person's hands, to find them customers. One of these two farms is liable not to be worked at all if not sold.

They say "put the women and girls into the fields to work." This is not practical. In the first place, they have all they can do in the house, then how many are physically able to do such work for any length of time? It takes a strong, able-bodied man to do all kinds of farm work successfully. Another thing is, can anyone expect men to leave the cities of their own free will to work on the farms? They have short hours, far higher wages than farmers are able to pay, and, in most cases, an opportunity to climb to responsible positions. For these reasons men are continually being attracted to the cities instead of from them.

The city business man or manufacturer is able to pay high wages, because he can raise the price of what he has to sell accordingly, whereas the farmer has to take whatever he can get, regardless of what it costs to produce it. Farmers now are able to make a larger profit than a few years ago, there being a larger margin between the cost of production and the selling price.

We recently sold six hogs for \$225. We paid \$24 for them when four weeks old. This leaves about \$200. Although we did not keep a feed account we are sure that \$100 would more than pay for the feed and the care that they got. We could not do that four or five years ago. This shows that all farmers need is more help. They are willing to pay reasonable and even more than reasonable wages for help, for it is in their interests to do so.

A lot of what I have written may sound pessimistic, but it is sometimes well to

CANADA MUSTERS HER MANHOOD



FOR the war against hunger as well as for the war against the Hun. For every Canadian fighting overseas, at least two on farms at home are serving none the less effectively because they wear neither uniforms nor marks of rank or valour.

Long and strenuous days are theirs, without leave or furlough! a steady drive through the daylight hours to keep the work abreast of the season, and save the crops so sorely needed to feed our fighting men.

Only those who spend such days can realize how good it feels to have a "wash-up" and a clean Gillette shave at night—or how it fits a man to enjoy the evening's rest or pleasure of the trip to town.

The busier you are going to be this

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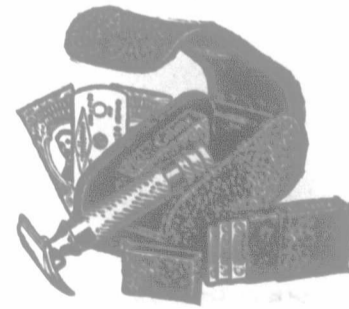
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Gillette Safety Razor Co., of Canada, Limited

Office and Factory:

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BULL DOG \$5.00

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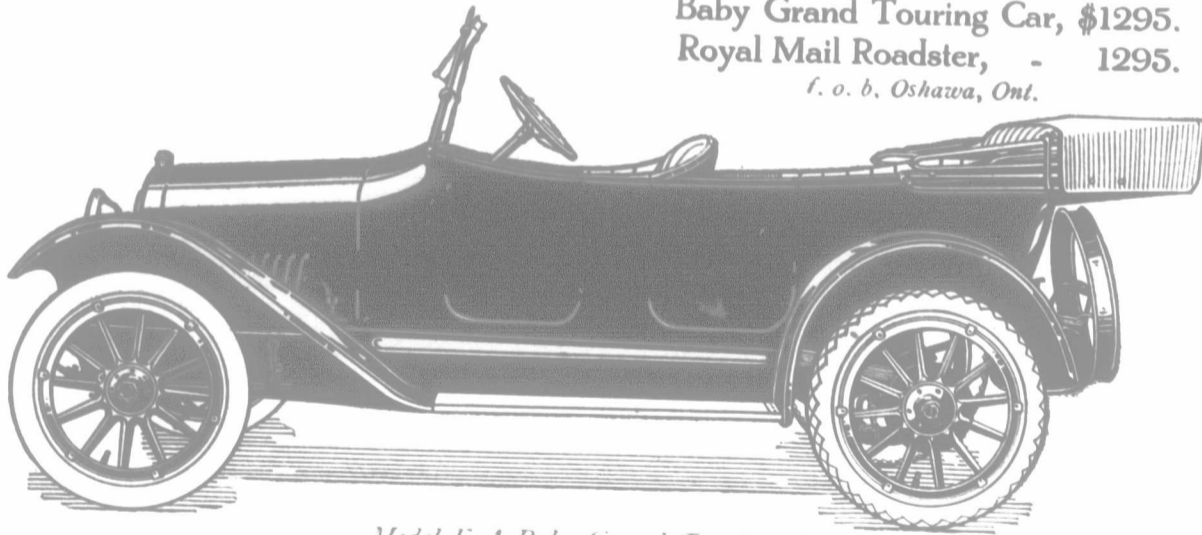
Now that the motor car is a necessity to crowd more into the busy day there is a demand for a sturdy, roomy, powerful car, economical to buy and economical to run—a car that is comfortable and will give good service day in and day out.

This new Chevrolet model fills this demand and is offered at a price far below that warranted by its value, and represents more CAR for your money than any new model on the market. See this model before you buy.

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Ninety-six pages of veterinary information, with special attention to the treatment of blemishes. Durably bound, indexed and illustrated. Make a right beginning by sending for this book.

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Strawberry Plants, etc.

We have a full line of first-class Strawberries, Raspberries, Currants, Gooseberries, Grapes, Asparagus, Roots, Fruit Trees, Ornamentals, Roses, Seed Potatoes, etc. Write for free catalogue.

Green Mountain Seed Potatoes for Sale. Won 1st prize in field competition in 1917. Grown in the best potato growing district in Ontario. Also Delaware variety, choice sample. Price \$2.50 per bush, sacks 10c each; to be shipped in April.

James Milloy, R.R. No. 1, Erin, Ont.
Hillsburg Sta., C.P.R. Caledon Phone.

H. L. McConnell & Son, Port Burwell, Ont. When writing please mention this paper.

look facts in the face. Farmers are willing and anxious to do all they can to increase production, but if the Government, in some way or other, does not furnish more help, I am very much afraid instead of increased production it will be the opposite.

Compton Co., Que. SUBSCRIBER.

The Farm Well.

Good water is as essential as good food for the maintenance of health in the family and the thrift of the farm live stock. An ample supply of pure, wholesome water is not only a blessing of inestimable value but one of the most valuable assets a farm can possess. There is no country in the world with a greater abundance of pure water in lakes, rivers and springs than Canada and there is no insuperable difficulty in the larger number of our agricultural districts in obtaining a supply ample and pure.

A glance through the Annual Reports of the Experimental Farms shows that the Division of Chemistry is doing a valuable work towards the improvement of the farm water supplies throughout the Dominion. In the course of the past thirty years many hundreds of samples from farm wells have been analysed and reported on. A perusal of these reports shows that year in and year out only about one-third of the waters were pronounced as pure and wholesome, in other words, were free from excretal drainage matter. This is not as it should be and the reason is not hard to find. In too many instances convenience only has been considered in locating the well. For the most part we find these polluted wells under stables, in barnyards or dangerously near the privy or where the slops from the farm house are thrown out. Wells in such locations can never be depended on to yield pure water. They must sooner or later become polluted by filth draining into them from the surrounding soil, which inevitably becomes saturated with manurial products. These wells indeed act as cesspits and the records show not a few instances in which the water of such wells possessed a distinct fertilizing value from the presence of excretal matter.

The lesson from these facts is: don't sacrifice health to convenience, locate the well at a safe distance—50 to 100 yards at least—from any possible source of contamination. A bored or drilled well tapping a deep seated source, tightly sealed off at the junction of the soil and rock, is likely to give the purest supply. If a dug well, line it to a depth of 10 or 12 feet with concrete or puddled clay, 4 to 6 inches in thickness, to ensure the exclusion of water from the surface layers of soil. Keep the surroundings of the well absolutely clear from the accumulation of filth and preferably in the grass. Make provision to carry off the waste water from the pump, so that it may not re-enter the well and so protect the mouth of the well that surface water cannot flow in and mice, frogs, snakes, etc., are excluded. With wells such as these pure water may be secured. A wind-mill, gasoline engine or hand force pump will be found a paying investment, enabling the water to be piped to the house, stable and barn, thus securing running water in the farm buildings—a convenience and blessing that needs only to be experienced to be appreciated.—Experimental Farms Note.

The-Know-It-Alls.

In our little town, Oh! sad to tell,
There is a merchant who doesn't know how to sell,
A sawyer who doesn't know how to saw,
A teacher who doesn't know how to teach,
A preacher who doesn't know how to preach,
A painter who can't paint very well,
A printer who doesn't know how to spell,
An odd-jobs man with never a job,
A cobbler who doesn't know how to cob,
A miller who doesn't know who to mill,
A butcher who doesn't know how to kill,
A racer who doesn't know how to race,
A mason who doesn't know how to mace,
A clock smith who cannot mend a clock,
And a doctor who doesn't know how to doc,
And since none of these are busy men,
You will find them again and yet again
Ever anon and a few times more,
Round the stove in Mendelson's store,
Each talking freely and through his hat
Doing the one thing they are expert at,
GIVING ADVICE TO FARMERS.
—News Notes, Col. Agr. College.

Cl... Se...

(Govern...)

No. 1 Alsike...
No. 2 Alsike...
No. 1 Red Cl...
No. 1 Alfalfa...
No. 2 Timothy...
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Silver Mine O...
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Terms:—Ca...
extra, 50c. e...
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We guarant...
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They cut, crush...
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makes an ideal...
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Write for booklet an...
10-dose pkg. Black...
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Use any injector, but...
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years of specializing...
ONLY. INSIST ON...
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FOR IMM... Clydesda...

Cumberland Recr...
1909; sure, active...
One Clydesdale s...
years old. Also a...
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Clover Seeds

(Government Standard)

No. 1 Alsike.....	\$16.00
No. 2 Alsike.....	15.00
No. 1 Red Clover.....	24.00
No. 1 Alfalfa (Northern).....	16.50
No. 2 Timothy (No. 1 Purity).....	5.50
O.A.C. 72 Oats.....	1.25
Silver Mine Oats.....	1.25
O.A.C. 21 Barley.....	2.00

Terms:—Cash with order. Bags extra, 50c. each. Jute bags for oats, 20c. We will pay freight on clover seeds.

We guarantee our seeds to satisfy you, or you may ship back at our expense.

Ask for samples if necessary.

Caledonia Milling Co., Limited
Caledonia, Ontario



"The Coulters Do The Work"

They cut, crush, smooth, pulverize, and mulch, turning the soil twice—all in one operation. That's why the

"Acme" Pulverizing Harrow makes an ideal seed bed. Light draft—easy on the horses and YOU ride. There's an "Acme" for every purpose—sizes 3 to 17½ feet in width. Send for new free book, *The "Acme" Way to Crops That Pay*. Do it NOW.

Bateman-Wilkinson Co., Limited
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No. 23 6½ ft. wide



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Ship your cream to us. We pay all express charges. We supply cans. We remit daily. We guarantee highest market price.

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FOR IMMEDIATE SALE Clydesdale Stallions

Cumberland Recruit (imp.) 13372, foaled 1909; sure, active and quiet. Form 1. One Clydesdale stallion, bay, rising two years old. Also a few young Shorthorn bulls. Geo. B. Armstrong, Teeswater, Ontario

Road Making.

There are many miles of roads which must be maintained by some means, more or less inexpensively. On the Dominion Experimental Farms, the Split-Log Drag is found to be one of the most useful implements for this purpose. It is now in use in many localities and an increasing mileage of the rural highways of this country is being kept in repair economically by the use of this simple implement. A dry, sound red cedar log is the best material for a drag, the hard woods being usually too heavy for this purpose. The log should be from seven to eight feet long and from ten to twelve inches in diameter and carefully sawn down the middle. The heaviest and best slab should be selected for the centre, both flat sides to the front and set on edges thirty inches apart, giving the back half a set-back of sixteen to eighteen inches at the right end so that when the drag is drawn along at an angle parallel to the ditch on right side of the road, the end of the back half will be directly behind the front half as otherwise the ditch end of the rear slab would stick out past the ditch end of the front slab, crowding into the bank and interfering with the proper working of the drag.

Two cross-pieces are wedged in two-inch auger holes bored through the slabs and on the right hand side a piece of scantling is inserted between the ends of the slabs. This is of great value in strengthening and stiffening the end of the front slab.

In working a clay or gumbo road it is advisable to put iron on the lower edge of both flat sides. Handles may be attached to a piece of iron similar to a piece of wagon tire, the irons to be hinged to the back of each end of the front slab. By pressing the handles the drag could be raised, thus depositing a load of dirt which is desired to fill a hollow or increase the crown at some particular spot.

A platform of inch boards held together by three cleats should be placed on the stakes between the slabs. These boards should be spaced at least an inch apart to allow any earth that may heap up and fall over the front slab to sift through upon the road again. The end cleats should be placed so that they will not rest upon the cross stakes, but drop inside them. These cleats should extend about an inch beyond the finished width of the platform. An extra weight may be added if necessary but it is seldom needed.

To use the drag, attach a chain to the left cross piece which is behind the front slab, running the other end of the chain through the hole in the front slab near the right end. It is a mistake to hook this end of the chain over the front slab as in the case of the other end, for when the drag strikes a stone or snag there is great danger of toppling forward. With the right end of the chain drawn through the hole in the slab as suggested, this danger is entirely obviated.

The operation of the drag is very simple though there are many fine points that may be learned by experience. For ordinary smoothing purposes, the drag may be drawn up and down the road one or two rounds commencing at the edge and working towards the centre. Usually it is drawn at an angle of about 45 degrees. For the last stroke or two the drag may be drawn backward with the round side of the slab to the front and with comparatively little angle.

There are two stages when roads will drag and one when you cannot do a job satisfactorily. The first stage is when they are in a very sloppy condition in spring or in other seasons after a heavy rain. A road may then be shaped up wonderfully well, and after the surface has a chance to dry a little, before it is cut up with traffic, it will make a smooth, fine road. Dragging at this stage fills ruts and sends the water to the ditches. After this soft stage, comes a sticky stage when the mud will roll up under the drag and the road cannot be reduced to a satisfactory condition. After this again, when the surface approaches a crumbly texture, the drag may be used very successfully. —Experimental Farms Note.

A country boy of three accompanied his parents to his first ball game. After watching the game awhile his gaze fell upon the catcher and he cried:

"Oh, mamma, look at the man with a calf weaner on."

Patriotism Demands Grain Conservation

We must save all we can of the 1918 grain crops, so we shall have enough to send to our armies and insure Canada an adequate home supply.

Thousands on thousands of bushels can be conserved if we feed less grain to cattle.

By substituting silage, every Canadian farmer can do his part in the grain conservation movement, and at the same time increase our milk supply so we can send more butter-fat to the boys at the front.



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Get more Milk with an IDEAL GREEN FEED SILO

An Ideal on your farm will cut 15 to 20% off your next winter's feed bill and enable your cows to give 20 to 25% more milk.

It will "put your cows on pasture" from November to April.

Now is the time to buy your Ideal Silo. You can get it installed before the rush of spring work comes on. Write to-day for our catalogue.

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It is sheer waste to raise calves on whole milk when they will grow and develop as rapidly on International Grofast Calf Meal. The calves like GROFAST fine, and it costs but a fraction of the price of milk. Ask your dealer for GROFAST.

Write for booklet, "How You Can Raise and Grow Calves at a Low Cost Without Milk."

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We have on hand at present one of the strongest selections of imported and Canadian bred stallions we have had in the stables in years. A strong combination of size, quality and breeding. We also have 15 in-foal mares, all to the service of horses we are offering.

SMITH & RICHARDSON COLUMBUS, ONTARIO
Myrtle, C. P. R. Oshawa, C. N. R. Oshawa, G. T. R.

Clydesdales and Shorthorns
I still have some Shorthorn bulls, twelve and thirteen months old. Two grandsons of Old Sort, and four great-grandsons of Royal Blood; these are an exceptionally fine lot; also a number of females. Inspection invited. Apply to J. B. CALDER, Glanford Station, R.R. 3.

BROOKDALE FARM HEREFORDS

Herd headed by Bonnie Ingleside 7th, the Canadian-bred champion bull at Toronto, 1914-1915. We are offering several young bulls that were Toronto and Ottawa winners this year, all sired by the herd bull as well as a few females in calf to him. Come and see our herd or write us for anything in Herefords. W. READHEAD Brookdale Farm MILTON, ONT.

KNIGHTON LODGE STOCK FARM

Offers for sale one Aberdeen-Angus bull, 15 months old, in the pink of condition, and a show animal. Cheap, quality considered. C. C. KETTLE, Wilsonville, Ont.

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STALLION, rising 3 years, large size, good conformation and action; from imp. sire and dam. Also two fillies.

HOLSTEINS. Females—a number fresh. Also two brood sows (grade Yorkshires) due to farrow May 5.

Warren Stringer, R.R. 1, Dunnville, Ont.

For Sale—Clydesdale Stallion

Dan, Spencer (16550); foaled May 12th, 1914; bay stripe, four legs white, best of feet and legs; was first in class and Reserve Canadian-bred Champion at Ottawa Fair, 1917. Sire, Sir Spencer Imp. (9655) 13211. Dam, Delmena Queen of Cherry Bank (20240).

ALBERT NUSSEY, Brysonville, Quebec

FOR SALE

PERCHERON STALLION, HARRISON (IMP.) France, 74902; U. S., 52505; Canadian, 1391. Enrollment No. 1483, Approved, Form 1. Color, dapple grey; foaled 1907. Has travelled eight successful years on one route and proved himself 80 per cent. of a foal-getter.

Herman Smith, R. R. No. 1, Wheatley, Ont.

CLYDESDALES AND SHORTHORNS

for sale, Shawano King Imp. No. 15708; Baron Knight No. 11176. 4 Shorthorn bulls, over 13 months and under 2 years. Some young cows and heifers, bred to King Dora Imp., No. 107291, and with calves at foot.

Sockett Brothers, R.R. No. 5, Rockwood, Ont.

The Noted Percheron Stallion

Ceruus for Sale.

[30] (48723); approved form A1, guaranteed right and a sure foal getter. For further particulars, apply to J. A. Clark, R.R. No. 5, Parkhill, Ont.

Aberdeen-Angus

We have a splendid selection of last spring's bull calves to offer, sired by our noted herd bulls and from our choice home-bred and imported cows. Inspection invited. Berkshire Boars and Sows, LARKIN FARMS (MENTION FARMER'S ADVOCATE) QUEENSTON, ONTARIO

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Shorthorn steers dressed the highest percentage at the Chicago International in 1917. Shorthorn steers are preferred by the largest buyers of feeders on the Chicago market. Shorthorn steers show greatest weight for age.

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DOMINION SHORTHORN BREEDERS' ASSOCIATION

W. A. DRYDEN, Pres., Brooklin, Ont. G. E. DAY, Sec., Guelph, Ont. 10

Write the Secretary for free Publications

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

ROSEWOOD CHAMPION, by Nonpareil Archer, Imp., at the head of the herd. I have almost 100 Shorthorns in my stables at present. Many Misses, Campbell-bred Clarets, Nonpareils, Minas, Rosemarys, etc.—the best of breeding and the best of cattle; bulls or females; also have a few Herefords.

FLETCHER'S SHORTHORNS

Our herd of Scotch Shorthorns represents Orange Blossoms, Kiblean Beauties, Matchless, Mysies, Misses, Clementinas, etc., and is headed by the Watt-Stamford bull, Victor Stamford = 95959 =, a Toronto winner. Present offering—two young bulls (show animals); also several heifers and cows. GEO. D. FLETCHER, ERIN, R. R. 1, ONT.

Erin Station, C.P.R. L.-D. Phone

What the Hired Man Thinks.

EDITOR "THE FARMER'S ADVOCATE":

I have just been reading your article on "Wages and Farm Returns" in the issue of the 14th inst., in which you raise the issue that farmers cannot pay wages to compete with city business, but are paying a fair wage in comparison with what they make. In support of this you quote figures from information sent out by the Census and Statistics Office, and while it has been truly said that figures may be made to prove anything, I propose to deal with the point on the basis of these figures as seen from the hired man's point of view, a point of view which has not been much aired; although every page you pick up now is full of the farmers' views on the subject, coupled with advice to the farmer from all sorts and conditions of men as to what he should do (advice which the farmer doesn't want, he being well able to run his own business).

I do not propose to deal with the question of Farm Returns as I do not feel that I am qualified to do so, but I would point out that your statement that the average labor income shown in the returns is what the farmer and his wife and children get does not appear to be correct. In the report it is shown that on each farm only one person was taken as the operator and all family help was allowed for at the rate which would have been paid if such help had been hired. Then, again, no account was taken of anything supplied to the house from the farm, an item of some value in view of the price of milk, eggs, vegetables and such like farm products. Of course, \$500 does not look much as wages for the manager of a business with thousands invested, but, when you add to that the fact that the outlay for house rent and a good part of the food is already provided for, I doubt if the manager of any other business of the same capitalization will show a much better return. Then, again, the wages of most managers depend, in a large degree, on the results they obtain—if the results are small the wages are small—and the farmer is the same; if he cannot get better results his pay is small. Again 5 per cent. on investment is allowed and, while I do not follow trade returns sufficiently close to know whether this compares favorably with the interest on capital in other business concerns, the rate does not strike me as being very low—I can only get 3 per cent. from the bank for what cash I invest with them.

But the part of your article I wanted to deal with was the question of wages and farm conditions from the point of view of the hired man—I have had 10 years' experience to guide me—and first I propose to deal with the figures given in your own article of the above date, and then with the work expected in return for such wages and the general conditions under which such work is done. It is usual to take ladies first and, while the ladies are well able to look out for their own interests, I would point out that the average wage of \$364 per year shows approximately \$1 per day, not a very big payment when we remember that

"A man works from sun to sun,
But a woman's work is never done."

and this is more particularly true on the farm where, even if there is no milking, etc., to do outside, a woman has nearly as much housework, cooking, etc., to do on Sunday as on any other day.

For men the average monthly wage is given as \$610.60 for a man hired by the year. Now, if we take off 52 days for Sundays and 8 days for the legal holidays (which holidays many hired men never get) we have 305 working days, and the pay, therefore, works out at \$2 per day. This is not much (in fact, it is not as much as the poorest laborer can easily command at any other occupation, however unskilled he may be), but let us see what are the usual conditions prevailing on a farm where these are the average wages.

Without taking notice of any extra hours during seeding, haying and harvest, the hired man, generally speaking, is supposed to put in 10 hours' work in the field and do chores, and it is these chores that prevent any satisfactory comparison being made between farm hours and those prevailing in other trades. In passing I may say I once saw the word "chores" defined as a term invented in America to enable the

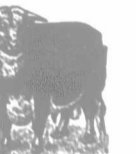
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Bulls of serviceable age and females not akin.

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Angus - Southdowns - Collies
SHOW FLOCKS

Rams and ewes. Heifers in calf to Queen's Edward, 1st prize, Indiana State Fair.

Robt. McEwen, R. R. 4, London, Ont.

Kennelworth Farm ABERDEEN-ANGUS

A grand lot of calves for sale; ages in the neighborhood of 7 months. Victor of Glencairn at head of herd.

PETER A. THOMPSON, HILLSBURG, ONT.

ABERDEEN-ANGUS

Alonso Matthews, Manager, Forest, Ontario
H. Fraleigh, Proprietor, Mendowdale Farm, Forest, Ont.

Newcastle Herd of Shorthorns and Tamworths For Sale;—2 boars 8 and 12 months old; several boars and sows 2 to 6 months old. Young sows bred and 2 show sows 2 years old, safe in farrow. All descendants of Colwill's choice, champion at Toronto Industrial 3 years in succession, and Imp. Chalderton Golden Secret. Long-distance Phone. A. A. Colwill, Prop., R.R. No. 2, Newcastle, Ont.

Lakeview Farm Shorthorns

A few females for sale sired by a son of Clansman, 87809. Apply to:
A. J. FOX HARROW, ONT.

Reg. Aberdeen-Angus Bull

Calved February 27th, 1915.
R. R. Birkett, Brantford, Ontario

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of all descriptions. Speciality made of draft horses, beef and dairy breeds of cattle, show and field sheep. Illustrated catalogues and testimonials on application. All enquiries answered with pleasure. Now is the time to import. Prospects were never better, and insurance against all war risks can be covered by payment of an extra 1% only.

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Half price for quick sale.
19 Volumes—1898-1911.

W. DOHERTY, CLINTON, ONTARIO

farmer to squeeze a few hours' work a day out of his hired man without pay; not a bad definition. Now, these chores have to be done every day, including Sundays and holidays, and if we put the time occupied as 2 hours per day I think any hired man will agree that that is a very moderate estimate; this makes 12 hours per working day, and at \$2 per day we have the grand total of less than 17 cents per hour, with no allowance for Sunday work or any pay for over-time. In any other trade the pay would certainly be better, the working hours shorter, there would be pay for any over-time after 10 hours per day, and the worker would have the whole of Sunday and, in many trades, Saturday afternoon entirely free. Then there is another point in connection with wages which is a sore point with many hired men, namely, the custom which prevails of paying wages only at the end of the year, so that every time the hired man wants a bit of tobacco to smoke or a pair of socks to wear, he has to go to his employer like a kid and say, "Please give me a few cents." This isn't good for the man's self-respect, of which even the hired man has his share. If he works at any other business he'll get his pay every week, or at least every month, as is right; why should the employer keep the money in his business at 5 per cent. and have the benefit of the man's work for a year as well.

I am afraid this letter is dragging out to a greater length than I intended, but lastly (as the minister used to say when about half way through his sermon), the figures in your article show the wages for 1917, with which I am dealing, to be an increase of \$20 per month over 1916, and probably those paid in 1916 were an increase over these of 1915 (in fact I know they were) so what was the hired man getting a few years ago? Not much.

The fact is, and the farmer has to face it, the long hours, poor pay and general unsatisfactory conditions under which he had to work, has driven the hired man to seek other employment, and it will take more than talk about increased production to get him back, although as a class he is as patriotic as the rest of the crowd. As I said before, I have had 10 years' experience as a hired man on farms and, as a result of my experience and that of fellow workmen with whom I have come in contact, I can say that before the farmer can get sufficient help he will have to offer terms which will compare with other occupations. To do this we must have, in the first place, a rate of wages which will equal other trades, and in fixing that rate attention must be paid to the longer hours; secondly, the wages must be those of a skilled man, for a farm hand is just as much a skilled man as any other tradesman, although up to the present time he hasn't got the wages of the most unskilled laborer; thirdly, some consideration must be made to give relief from work (chores) on at least some Sundays and holidays so that the man can sometimes have a whole day to himself; and lastly, the hiring must be for a year—it won't do for the farmer to want the man only when he wants him badly in the summer and let him go in the winter.

Halton Co., Ont. JOHN EMERY.

Questions and Answers. Veterinary.

Poluria.

Heifer 11 months old had indigestion 8 weeks ago. Since then she has been very thirsty and voids large quantities of very light-colored urine. She is not thriving well. C. D.

Ans.—Give her 20 grains of iodine crystals in a pint of water as a drench three times daily until the excessive thirst and excessive excretion of urine cease. V.

Miscellaneous.

Headlights.

Is it necessary to have headlights on an automobile that will reflect the light to a height of 42 inches only? J. P.

Ans.—We understand that a law has been passed making it necessary to have headlights of such a nature that the light will not reflect above a certain height. The regulations also call for glass that does not cause that penetrating glare which is so hard to face.

"Have not cost a dollar for repair"—

One of the beauties of the Tarvia proposition is the fact that even a very small village can afford to have fine, smooth, dustless Tarvia roads.

Here is little Grand Mere, for instance.

It has been using Tarvia for years—30,000 gallons altogether.

Its macadam roads, bonded with Tarvia, look like costly city pavements and wear perfectly.

The first cost does not greatly exceed plain macadam and the Tarvia surface adds so much to the life of the road that its use saves money in the end.

The landscape architect of Grand Mere, Mr. F. De Peyster Townsend, writes regarding these roads:

"Tarvia roads were built five or six years ago which have not cost a dollar for repair. They have

remained so good, in fact, that it is going to be necessary to put in cross-gutters or 'thank-you-marms' in restraint of autoists. These roads have not been subject to an excessive amount of traffic, but the climatic conditions, always one of the su-

premetests of roads, are about the worst possible, and I conclude from observation that these roads would have stood

up under any traffic.

There are several grades of Tarvia to meet varying road conditions.

If you want good roads at little cost in your locality, the use of Tarvia is the best way to insure this result.

Booklet telling about the various Tarvia treatments free on request.



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HIGH-CLASS SHORTHORN BULLS

We have a number of choice young bulls on hand, ready for service. Some are straight Scotch and others are bred for milk production. Also offering the four-year-old Duchess-bred bull, Duchess Hur for sale or exchange. GEO. MORDEN & SON, OAKVILLE, ONT.

THE MANOR STOCK FARM--SHORTHORNS

Bulls all sold. Have Wimples, Rosemarys, Minas, Roan Ladys, etc., for inspection. JOHN T. GIBSON DENFIELD, ONTARIO.

BURNFOOT STOCK FARM

Breeders of high record, dual-purpose Shorthorns with splendid conformation for beef. Have a number of bulls calved last fall and early in winter. S. A. MOORE, PROP. (Farm one mile north of Caledonia) CALEDONIA, ONTARIO

WELLAND DISTRICT SHORTHORN BREEDERS' CLUB

New sales list out: cows, heifers bred, young bulls, also stock bull Morrison Pride =102330=.

Chas. Gainer, Secretary, Box 607, Welland, Ontario. A. E. Howell, President, Fenwick, Ont.

SEVENTY-THREE HEAD OF SHORTHORNS

Four good young bulls of serviceable age; Nonpariel Ramsden =101081= and Royal Red Blood =77521=, at the head of the herd. These young bulls range in age from 8 to 15 months, and are for immediate sale. They are out of good dams, which will bear inspection. Our cows and heifers will please, and you'll like the bulls. Also three extra-good grade heifers, from heavy milk-producing dams. James McPherson & Sons, Dundalk, Ontario

SHORTHORN BULLS Will. A. Dryden

of my own breeding, around a year old; best families and good colors, are for sale. Also a few young, imported bulls. Brooklin, Ontario County Myrtle, C.P.R. Brooklin, G.T.R. Brooklin, C.N.R.

GERRIE BROS.' SHORTHORNS

Herd headed by Gainford Matchless, one of the very best sons of the great Gainford Marquis. Our breeding cows are Missies, English Ladys, Duchess of Glosters, etc. Present offering of young bulls are by our former herd sire, Master Missie, Junior Champion at Brandon last summer. GERRIE BROS., ELORA, ONT.

BLAIRGOWRIE SHORTHORNS

I have females all ages and bulls of serviceable age. Worth while to come and see or write. JOHN MILLER Myrtle Station, C.P.R., G.T.R. ASHBURN, ONTARIO

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Questions and Answers.
Miscellaneous.

Wood Borers.

We have a maple floor in a room downstairs which is becoming perforated with little holes about the size of a pin-head. In the hot weather there are small flies gathered in the window sills, which I am positive came out of the floor. Can you tell me of any method to get rid of these things in the wood? W. F. B.

Ans.—These holes in the floor are the work of small wood borers. You will find it rather difficult to get rid of them. Applying oil to the floor may prevent them from working, but we doubt if you can apply anything that will destroy them once they gain entrance to the wood. The larger borers which work in the trees are destroyed by inserting a piece of wire, but this would be impracticable with the small borers which are working in the floor.

Purchasing Feed.

1. Is it possible for a dealer or farmer to purchase from any of the milling companies a car of mixed feed, such as bran and shorts, without having to take flour with the feed?

2. What is the address of the men who are looking after the placing of boys on the farm? G. D. P.

Ans.—1. There is nothing in the regulations regarding having to take flour when purchasing bran and shorts. However, we understand that some of the mills are making a practice of selling in this way.

2. In regard to securing boys, there are a number of enrolment officers in the districts, and farmers may apply to the District Representative, or the Ontario Government Employment Bureaux, 15 King St. East, Toronto; 139 King St., Ottawa; 83 James St. North, Hamilton; 108 Dundas St., London.

Ticks on Sheep.

1. What is a good dip to apply to sheep that are bad with ticks? Is there anything which can be put on without wetting the wool?

2. What time should turnips be planted for seed? Should they have good roots on them? What time will the seed be ripe? R. A. P.

Ans.—1. The commercial sheep dip can be applied even at this time of the year. Open up the wool on the back and sides and apply a little of the dip. This will get rid of many of the ticks. The ticks frequently leave the sheep and go on to the lambs and it will be necessary to apply treatment to the youngsters. If you have them in a warm place they may be dipped.

2. Turnips may be planted as soon as warm weather has set in and growth has commenced. They should be placed in the ground so the crown will be on a level with the ground surface. Turnips may be planted as they were harvested in the fall. New roots will develop. The time at which the seed will ripen depends somewhat on the season. They will likely ripen early in the fall.

Veterinary.

Growth on Lip.

Heifer has a lump about the size of a plum on her lower lip. G. E. C.

Ans.—This is a wart or tumor of some nature. It should be carefully dissected off and the raw surface then dressed 3 times daily until healed with a 5-per-cent. solution of one of the coal-tar antiseptics or carbolic acid.

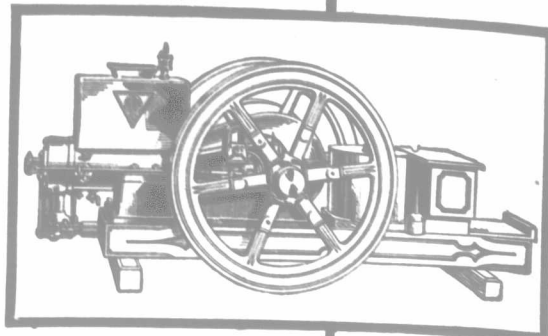
Inappetence.

Mare was sick about three months ago. I feed 1/2 gill in grain three times daily, and sugar beets and carrots at night. She gets a little exercise every day. She has not much appetite. P. D.

Ans.—Give her a heather of 1/2 pint raw linseed oil, and follow up with a tablespoonful three times daily of equal parts of powdered sulphate of iron, gentian, ginger and nuxvomica. Continue the daily exercise.

Alpha Gas Engine

So simple your boy can operate it—and always dependable



When you buy a gas engine you want one that your boy or your hired man can look after.

You want an engine that will always RUN when you want it to. That is the kind of an engine the ALPHA is.

There's nothing complicated about it—no fragile electric batteries, no attachments that puzzle you. Every part is sturdy—built of the best materials—and will stand up under hard work.

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The De Laval Company, Ltd.

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA. Sole manufacturers in Canada of the famous De Laval Cream Separators and Ideal Green Feed Silos. Alpha Gas Engines, Alpha Churns and Butterworkers. Catalogues of any of our lines mailed upon request.

MONTREAL PETERBORO WINNIPEG VANCOUVER
50,000 Branches and Local Agencies the World Over

Made in twelve sizes, 1 1/2 to 28 H. P. Each size furnished in stationary, semi-portable or portable style, with hopper or tank-cooled cylinder.

Flintstone Farm

Breeders of—

Milking Shorthorn Cattle
Belgian Draft Horses
Berkshire Swine
Rhode Island Red Poultry

Our winnings at the Eastern States Exposition speak for the type of our animals—Our official production Records are equally superior—

The great size of our herds offers unusual opportunities for selection—We would like to send you our catalogues and production records—

Dalton
Massachusetts

Dual-Purpose Shorthorns

Herd headed by Dominator No. 106224 whose grandam on his mother's side has an R. O. P. record of 13,535 lbs. milk, testing 3.99, and whose dam has an R. O. P. record of 10,639 lbs. milk, testing 3.88. Cows, heifers and young bulls for sale; some of the latter are out of cows in the herd which have given between 10,000 and 11,000 lbs. of milk each in one lactation period.

WELDWOOD FARM
FARMER'S ADVOCATE, LONDON, ONTARIO

Mardella Shorthorns

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

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

Glenfoyle Dual - Purpose Shorthorns

Herd bull College Duke 4th, 95430, big, thick young cows and heifers for sale; 8 young bulls, some herd headers. Also a yearling Clyde, stallion STEWART M. GRAHAM, LINDSAY, ONT.

Spruce Lodge Shorthorns and Leicesters

Herd headed by the Butterfly-bred bull, Roan Chief Imp. #90865—. Young bulls, cows, and heifers of all ages, of good breeding and quality. W. A. DOUGLAS, CALEDONIA, ONTARIO

Plaster Hill Herd Dual-Purpose Shorthorns.

Six young bulls from four to thirteen months. Size, quality and good milking strains. F. Martindale & Son, R.R. 3, Caledonia, Ont.

Evergreen Hill R. O. P. Shorthorns

Offering a 13-month-old son of the R. O. P. bull, St. Clare. Dam has record of 7,064 lbs., test 4.57. S. W. JACKSON, WOODSTOCK, R.R. 4, ONT.

THE HAWTHORNE SHORTHORNS

Just one son bull left, 18 months, priced low for immediate sale. I have a few females we could spare. Leicester rams and Yorkshire sows. ALLAN B. MANN, "THE HAWTHORNE" R. R. 4, PETERBORO, ONT.

SALEM SHORTHORNS

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

Robert Miller, Stoffville, Ont.

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

Write for anything in Shorthorns One hour from Toronto

Imported SCOTCH SHORTHORNS

Our present offering includes 100 imported females and 12 young imported bulls, representing the most desirable lines of breeding. If interested come and see them. Burlington Jct., G.T.R. is only half mile from farm. J. A. & H. M. PETTIT, FREEMAN, ONTARIO.

OAKLAND 60 SHORTHORNS

Present offering is 7 bulls from 10 to 20 months of age; also a few cows with calves at foot, all choicely bred dual-purpose animals, and priced below their value. Crown Jewel 42nd still heads this herd. JOHN ELDER & SONS, HENSALL, ONTARIO.

SPRING VALLEY SHORTHORNS

Herd of seventy head, straight Scotch, good individuals. Headed by the great show and breeding bull, Sea Gem's Pride 98303, and Nonpareil Ramsden 83422. We have for sale four as good young bulls as we ever had, and a few females. KYLE BROS., Drumbo, Ont. (Phone and telegraph via Ayr.)

FIFTY IMPORTED SHORTHORNS

I have fifty head of newly imported Shorthorns (42 females, 8 bulls) which are acknowledged to be one of the strongest lots that have left Britain this season. You should see these if you are wanting something choice. George Isaac, (All Railroads; Bell Phone) Cobourg, Ontario.

PLEASANT VALLEY FARMS

Herd headed by (Imp.) Newton Grand Champion and Belmont Beau. We have for sale a goodly number of real good young bulls that will suit the most exacting; also females. Inspection invited. Geo. Amos & Sons C. P. R., 11 miles east of Guelph Moffat, Ontario.

FAIRVIEW SHORTHORNS AND CLYDESDALES

In Shorthorns we can offer you a choice, from 69 head, including both bulls and females, of Lavender Missie, Augusta, Duchess of Gloster, Village Girl, Miss Ramsden and Clara breeding—the best of cattle and the best of pedigrees. In Clydesdales, write for our list of winnings at Toronto, London and Guelph 1917 shows, Canadian-bred classes. We also have a nice offering in Shropshires. ROBERT DUFF & SONS Myrtle Station, C.P.R., and G.T.R. MYRTLE, ONTARIO

A. G. Farrow, Oakville--SHORTHORNS

Herd headed by Proud Lancer (Imp.) and Pride of Escana, a great son of the great Right Sort Imp I have a few bull calves of the better sort. Three imported ones left. Prices right. Farm one mile from station. Trains every couple of hours each way.

MAPLE HALL SHORTHORNS

Present offering, 7 yearling bulls: One Cruickshank Duchess Gloster Five Cruickshank Butterflys. One Shepherd Rosemary All pure Scotch, and extra good; also a few young cows with calves, and yearling heifers. D. BIRRELL & SON, CLAREMONT, ONT.

GLENGOW SHORTHORNS

We have a choice offering in young bulls, fit for service. They are all of pure Scotch breeding and are thick, mellow fellows, bred in the purple. WM. SMITH, COLUMBUS, ONTARIO. Myrtle, C.P.R., Brooklyn, G.T.R., Oshawa, C.N.R.

Choice Grandson of Queen Butter Baroness

I am offering a choice 14 months bull from a 21-lb. junior two-year-old daughter of Louis Prilly Roubie Hartog, and sired by Baron Colantha Favre, a son of Queen Butter Baroness, the former 33-lb. Canadian champion cow. Also have others younger. T. W. McQUEEN (Oxford Co.) TILLSONBURG, ONT.

60

at High
W

We are offering are sisters of thilde 2nd, and Duches lbs. butter i a number of over 20,000 Thirty head dam has a r also a grand 90% of the

Conveyance train from th

T. G. GR

29.68

Burkey

Her dan
Her sire is a Sylvia" (wor

You can "RAUWER" lbs. in 1 year butter as sen

Where Can He it

JOS. O'R

3,700 Guineas

The great sum paid at Thornb cently for a Dut about two years out the 3,200 gu and the 3,100 gu noted in one of The bull now fa calved on April 1 Penrith sale by Farm, Skelton, ne him fairly cheap sale, since whic out of all recogni at New Marcha Crombie, and Collynie Sweepst terfly Queen 6th, Butterfly and c ing.

The initial b guineas, and he guineas; then a and four more n 3,700 guineas, w buyer, A. J. Ma land, was decla Raoul Casares, n of that Argentin 1,800 guineas fo berland's British herd, still another 1,600 guineas for

American buye away from Penr 400 guineas for Fusilier; Peter R George Harris o guineas for Harr King; all tantio prize winners.

For W. Parkin Mysie, Harroth, paid 200 guineas, guineas for W. Bellina. At Pen males and femal just over double that was made i of 1917.

DISPERSION SALE OF
60 Pure-Bred Holsteins
 AND A NUMBER OF YOUNG CALVES
 at Highwood Stock Farm, Ingersoll, Ont., at 10.30 o'clock, on
Wednesday, April 10th, 1918

We are offering 8 choice young bulls of serviceable age. Included in this sale are sisters of two of the Canadian R.O.P. Champions, Calamity Snow Mechthilde 2nd, at three years, 23,274 lbs. milk and 1,053 lbs. butter in 1 year; and Duchess Wayne Calamity 2nd, at two years, 16,714 lbs. milk and 864 lbs. butter in 1 year. We are also offering a daughter, 3 granddaughters, and a number of great-granddaughters of Fairmont Wayne, who has a record of over 20,000 lbs. milk and over 800 lbs. butter two years in succession. Thirty head in this sale are the get of King Isabella Walker (imp.), whose dam has a record of over 22,000 lbs. of milk, and 987 lbs. butter in one year, also a grandson and granddaughter of Queen Butter Baroness, 33.17. Fully 90% of the entire herd carry blood of the Canadian R. O. P. Champions.

Conveyances will meet morning trains at Ingersoll, and the C. P. R. noon train from the south at Salford.

WRITE FOR CATALOGUE. LUNCH PROVIDED

T. G. GREGG, R. R. No. 5, INGERSOLL, ONTARIO
 AUCTIONEERS:—MOORE & DEAN, WM. PULLIN

29.68 lbs. butter, 563.7 lbs. milk
 as a junior three-year-old
 This is the official record of
Burkeyje Hengerveld May Echo (12658)

Her dam "Burkeyje Hengerveld", is Canada's first 20,000 lb. 4-year-old. Her sire is a son of "May Echo" and a 3/4 brother of the great "May Echo Sylvia" (world's champion).

You can buy her son, sired by "Hillcrest Ormsby Count", a son of "RAUWERD COUNT DEKOL LADY PAULINE," 29,000 lbs. milk, 1,113 lbs. in 1 year, 112 lbs. milk in 1 day. Dam of K. P. Rauwerd, 3,413 lbs. butter as senior 3-year-old, 103 lbs. milk in 1 day.

Where Can You Equal This for Production and Re-Production?
 He is largely white in color—a beauty. Write us for Price, etc.

JOS. O'REILLY, R. R. No. 9, PETERBORO, ONTARIO



**A 29-pound sire going to head the herd of
 W. T. Davidson & Son, Meadowvale, Ont.;
 10 months old. Note the splendid develop-
 ment. Perhaps I have the one you want.**

Gordon S. Gooderham
 Manor Farm Clarkson, Ont.

SUMMER HILL HOLSTEINS

A number of choicely-bred bulls. One a real show bull, beautifully marked, dam a 30.76 junior four-year-old; sire's dam 34.60. The three nearest dams average over 100 lbs. milk a day. Can spare a few good heifers.

D. C. FLATT & SON, R. R. 2, HAMILTON, ONT.

MAPLE SOIL STOCK FARM OF HOLSTEINS

I am offering a few choice heifers, sired by King Segis Pietertje, that have just been bred to FINDERNE King May Fayne; also some heifers and cows due to freshen all the way from February until April. All bred to FINDERNE King May Fayne; a few heifer calves sired by FINDERNE King. Get some good ones.

H. C. HOLTBY, R. R. No. 1, GLANWORTH, ONTARIO.

Gossip.

3,700 Guineas For a Shorthorn Bull.
 The great sum of 3,700 guineas was paid at Thornborrow's Penrith sale recently for a Duthie-bred Shorthorn bull, about two years old. This figure wipes out the 3,200 guineas paid at Aberdeen and the 3,100 guineas realized at Perth, noted in one of my late contributions. The bull now favored was Everlasting, calved on April 13, 1916. He was sent to Penrith sale by J. Robinson, Town End Farm, Skelton, near Penrith; who bought him fairly cheap as a yearling at Perth sale, since which time he has improved out of all recognition. The bull was bred at New Marchar, Aberdeenshire, by A. Crombie, and his sire was Duthie's Collynie Sweepstakes and his dam Butterly Queen 6th. So he is a Cruickshank Butterly and of very fashionable breeding.

The initial bid for him was 1,000 guineas, and he was soon run to 2,600 guineas; then a jump to 3,000 guineas, and four more nibbles took him finally to 3,700 guineas, when the Argentine bull buyer, A. J. Marshall, Stranraer, Scotland, was declared his owner. Young Raoul Casares, now the sole representative of that Argentina firm in England, paid 1,800 guineas for the Duke of Northumberland's British Honor, and Joseph Shepherd, still another Argentine buyer paid 1,600 guineas for Tongswood Roster.

American buyers took a few nice bulls away from Penrith. Leslie Smith gave 400 guineas for Mrs. Burnveat's Moresby Fusilier; Peter Ross paid 300 guineas for George Harrison's Admiral, and 180 guineas for Harrison's Gainford. Rothes King; all mentioned herein being class prize winners.

For W. Parkin Moore's cow Mistress Mysie, H. Hartnett, another U. S. A. buyer, paid 200 guineas. Leslie Smith gave 150 guineas for W. P. Moore's 1917 heifer Bellina. At Penrith some 357 head of males and females realized £41,593, or just over double the average per head that was made in the corresponding sale of 1917.

RATS

TRAPPERS

I want **7,000 SPRING RATS**. Will pay from \$1 to 80 cts.
NO LESS THAN 80 CENTS

RATS must be well handled, heavy furred, and run. **LARGE, MEDIUM AND SMALL.** Damaged rats at value. Ship at once while the price is high.

S. ROBERTS
 531B, MANNING AVE., TORONTO

Do You Want to Lease a Bull with 30-lb. Breeding?

Then consider LYONS HENGERVELD CHAMPION, whose dam is a 25.83-lb. junior 3-year-old daughter of Baroness Madoline. Reason for leasing — we want to make his dam a 30-lb. cow before selling him. His sire's dam and grandams average 32.19. Write at once, or better, come and see him.

WM. STOCK & SONS, Sovereign Stock Farm, TAVISTOCK, ONT., R.R. No. 1
 Long-distance Phone, 3 on Line 25, Inverkip

Hospital for Insane, Hamilton, Ont.

ONLY THREE BULLS LEFT

(1) A splendid fellow, more white than black, born May 1917. He is a grandson of Dutchland Sir Mona, and his dam is a half sister of the famous Totilla of Riversdale.

(2) Born September and December, 1917, of A. 1. R.O.P. dams.

APPLY TO SUPERINTENDENT.

SILVER STREAM HOLSTEINS

Present Offering — six extra well bred bull calves, sired by bulls with 34-lb. backing, and from tested dams, individually as good as their breeding. For fuller particulars and prices, write, or better come and see them.

J. MOGK & SON, R. R. 1, TAVISTOCK, ONTARIO

Here's a Top-notch!

Sire, King Segis Walker; dam, 30-lb. daughter of Pontiac Korndyke, who herself has a 30-lb. daughter. He is a youngster, but he'll grow.

A. A. FAREWELL, Oshawa, Ont.

DUMFRIES FARM HOLSTEINS

Present Offering — A few bull calves.

S. G. & ERLE KITCHEN, ST. GEORGE, ONT.

WALNUT GROVE HOLSTEINS

I am offering a choice lot of bull calves, all sired by May Echo Champion, who is a full brother to the world's champion, May Echo Sylvia. All are from R.O.M. dams and good individuals. Also have the usual offering in Tamworth sires.

Take Rich's Cars from North Toronto.

C. R. JAMES, RICHMOND HILL, ONTARIO

Peter Ross got together a fine lot of young bulls and cows at Birmingham Show and Sale. For the second-prize winner in a class of 84 entries, C. F. Raphael's Shenley White Knight, he gave 450 guineas; for William M. Scott's Diamond Duke, third in a class of 94, he paid 400 guineas, but for Captain C. H. Jolliffe's Rodney, whom the judge didn't look at, he gave 1,100 guineas. Ross also paid 170 guineas for Hobbs & Sons cow Bobette 5th, and the same figure for C. E. Guthrie's bull Tongswood Mystery. For Tongswood Mist he paid 200 guineas.

All told at Birmingham some 267 head of Shorthorn cattle averaged £124 4s. 6d., or realized £33,168. The auctioneers were Thornton & Co. Top price of the event was 2,000 guineas paid for the reserve champion bull Notlaw Nimrod, bought by Joe Shepherd for the Argentine. Shepherd was "out for blood," for he gave 1,600 guineas for the champion Notlaw Darnley. Both these high-priced animals were bred by Dr. Vaughan Harley, at Walton Hall, Bletchley, Bucks, and they were got by a bull he unfortunately allowed to be sold at a previous Birmingham sale. The bull Notlaw Bonaparte was snapped up by an Argentine buyer, and out there he is getting rare stock. Moral: Never sell a bull till you see how his stock is coming.

ALBION.

K. Dalgleish, Kenmore, has been doing some official testing of late, and writes "The Farmer's Advocate" as follows: "I have completed a 26.23-lb. record in seven days and 110 lbs. of butter in thirty days as junior four-year-old on the daughter of Paul De Kol Aaggie Queen 5th, 31.23 lbs., by King Pontiac Artis Canada, which gives her two 31-lb. dams. She has a beautiful bull, sired by Fairview Korndyke Boy, whose three two-year-old daughters now in test have records of 20, 21 and 22 lbs. of butter in seven days, and over 600 lbs. of milk in seven days as well as 90 lbs. in one day. This gives him seven of his eleven two-year-old daughters with from 20 to 23 lbs. butter in seven days."

Butter Prices Will Be Maintained

THE Food Controller for Canada states: "I do not expect that the sale of oleomargarine will result in any reduction in the price of butter. The overseas demand is practically unlimited—For years after the war Europe will require all the butter which Canada can produce for export, and the prices are certain to be high."

High prices for butter make every pound of butter-fat saved a source of extra profit that's a revelation to many farmers and dairymen. The

Renfrew

saves you about one half-pound of valuable butter-fat, per cow, per week, over other machines, even if they are in running condition, and much more if they are not running properly. Multiply this half pound by the number of cows in your herd and then calculate what this means to you in dollars and cents per year. Will it pay you to continue losing money by using an ordinary machine? The Renfrew gets all but the last three ounces of butter-fat in a ton of milk skimmed.

Which would you rather sell at present prices?



10 Gallons of good firm butter-fat from the Renfrew which gets all but 1-10 pound in every 1,000 lbs. skimmed.

7 Gallons of butter fat from other machines which lose a whole pound in 1,000 lbs. of milk skimmed.

Besides quantity, the Renfrew gets quality. Good first-class cream means globules of fat unbroken, and better, firmer butter. This high quality of cream is secured by the exclusive curved wing centre-piece of the Renfrew, which distributes the milk to the discs in thin sheets, and prevents the slapping of milk and breaking up of the fat globules, which occurs with the ordinary straight wing machines.

Our illustrated booklet gives Government Dairy Schools proofs of the close skimming. Also read about the Renfrew's exclusive interchangeable-capacity feature, self-oiling system and many other modern advantages. Write for booklet today.

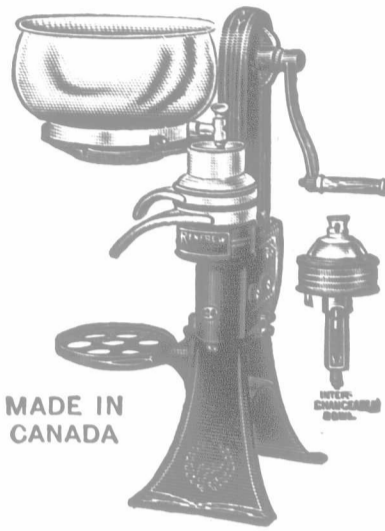
NOTICE.—The Renfrew Separator illustrated here was formerly sold under the name "Standard," which identified it as a high efficiency cream separator. The name "Renfrew" has been used on the same machine for several years for our United States and foreign trade and under that name has become as popular in those markets as under the name "Standard" in Canada. Now the name "Renfrew" has been adopted for Canada so as to link the name more closely with that of our company and so that we can sell the machine under a uniform name throughout the world.

The Renfrew Machinery Co., Ltd.

Head Office and Works: Renfrew, Ontario

Eastern Branch: Sussex, N.B. Agencies almost everywhere in Canada

Our Other Lines: Renfrew Kerosene Engine, Happy Farmer Tractors, Farmers 2,000 lb. Truck Scale, Wood Saws, Grain Grinders.



MADE IN CANADA

Questions and Answers. Miscellaneous.

Coons—Skunks.

1. How long does a female coon carry her young after being mated with the buck?
2. How many young do the females generally have?
3. What is the best enclosure for coons?
4. When do skunks mate and how long do they carry their young after mating?
5. What is their chief food? E. L.

Ans.—1. About 52 days.
2. The number varies from 6 to 10.
3. Wire netting.
4. During the late winter. The gestation period is similar to that of the coon.
5. Insects, grubs or meat of any kind.

Making Soap.

What is a recipe for making hard soap with Gillette's lye? I tried the directions on the tin without success.

2. Is there any way of cleaning white kid moccasins so they won't shrink?
3. What is the proper way to test seed grain?
4. Is it injurious for a cow to eat her afterbirth? A. K.

Ans.—1. In making soap with Gillette's lye the directions on the tin usually prove satisfactory, if carefully followed. When using the material mentioned we do not know of any other recipe that would give as good results.

2. Gasoline is as good as anything for cleaning moccasins. They may shrink a little, but this might be overcome by stretching them on a form to dry.

3. There are several methods which might be followed. The smaller seeds may be placed between two sheets of blotting paper and kept moist in a moderately warm place. For the larger grains a shallow box may be filled with sawdust, a piece of cotton placed over it, the grain placed on the cotton and then covered with more cotton or felt. The sawdust must be kept moist. If you had some loam soil the grain might be planted right in the soil and kept in a warm place. In testing corn, it is customary to mark off the lower piece of cotton in squares and place so many kernels from each ear in each square. In this way you can ascertain the germination of each ear.

4. It may not be injurious but it is inadvisable to allow a cow to eat the afterbirth.

Fertilizer for Various Crops.

1. Is it advisable to sow fertilizer in the spring on fall wheat? If so, what kind would be the best to apply and how should it be applied?
2. What fertilizers are best for spring wheat, oats, potatoes, onions?
3. When is the best time to trim a cedar hedge? R. D.

Ans.—1. For wheat the phosphates and potash should be applied in the fall. A little nitrate of soda or sulphate of ammonia would be the best mineral fertilizer to apply in the spring. They are readily available and the plants would get the full benefit of them. The plants might get some good from the potash and phosphates in the spring, depending on the nature of the weather. However, it is not advisable to count on getting much benefit from the latter two when applied to fall wheat in the spring. If the crop were a little later maturing it would be different. Fertilizer may be applied by hand or with the regular fertilizer drill.

2. For spring wheat and oats, 80 lbs. nitrate of soda, 250 lbs. acid phosphate, and 70 lbs. muriate of potash, making a total of 400 lbs. per acre would be considered a good application. For potatoes, a little heavier application of the materials is usually given. The muriate of potash, however, could be supplemented by the sulphate. Some apply as much as 130 lbs. nitrate of soda, 350 lbs. acid phosphate, and 160 lbs. sulphate of potash to the acre. For a crop like onions, as much as 250 lbs. nitrate of soda, 450 lbs. acid phosphate and 200 lbs. of muriate of potash is applied.

3. The hedge may be trimmed almost any time in the spring, or up until June.

THE MARTIN DITCHER AND GRADER
DIGS YOUR DITCHES
GRADES YOUR ROADS
EASILY QUICKLY CHEAPLY
REVERSIBLE ADJUSTABLE
PAYS ITSELF IN ONE DAY
DOES THE WORK OF 50 MEN
SEND FOR FREE BOOKLET
THE PRESTON CAR & COACH CO LIMITED
97 DOVER ST. PRESTON CANADA

A NECESSITY

at the head of your herd. A bull that combines type and production.

FOREST RIDGE FAYNE HENGERVELD will suit you. His dam and sire's dam average over 32 lbs. butter per week. Write for pedigree, photo and price on what you want in Holsteins to:

Forest Ridge Farms Or better come and see them. **L. H. Lipsit, Stratfordville, Ont.**

Finderne King May Fayne
His dam and full sister average 35 lbs. butter per week.

Daisy DeKol Hengerveld
Butter, 7 days. 31.20
Butter, 30 days 123.35

HOLSTEINS
1 bull 2 years old; 1 bull 18 mos. old, from a 23½ lb. 3-year-old dam. One bull 13 mos.; others younger.
R. M. Holtby, Port Perry, Ont.

For Milk, Butter, Cheese, Veal Holstein Cows Stand Supreme
If you try just one animal you will very soon want more.

WRITE THE
HOLSTEIN-FRIESIAN ASSOCIATION
W. A. Clemons, - Secretary - St. George, Ont.

KING SEGIS PONTIAC DUPLICATE
A ¾ brother to the \$50,000 bull is the sire of our young bulls offered at present. Two of these are ready for service. Write us also for females.
R. W. Walker & Sons, Manchester Station, G.T.R., Port Perry, Ontario

Advocate Ads. Pay

Roycroft Farm Holstein-Friesians
Our 30-lb. bulls have all been sold, but we still have several sons of Pontiac Korndyke of Het Loo, that are just nearing serviceable age. Get one of these for your next herd sire, have a brother of Het Loo Pietertje, the world's greatest junior two-year-old, at the head of your herd. We also have a 3-months, 27.78 lb. son of King Segis Alcartra; and one other, same age, by Dutchland Colantha Sir Mona. See them at once or write early.
W. L. SHAW - ROYCROFT FARM - NEWMARKET, ONTARIO.
Take Yonge Street Radial Cars from N. Toronto

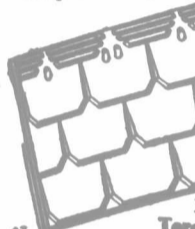
CHOICE BULLS READY FOR SERVICE
No. 1—By a son of MAY ECHO SYLVIA. His two nearest dams (both Canadian champions), average 35.62 lbs. butter in seven days. Price \$1,000.
No. 2—By a son of MAY ECHO SYLVIA. His two nearest dams (one a four-year-old), average 34.17 lbs. butter in seven days. Price \$600.
Some extra choice young bull calves from \$200 to \$1,000. We have sold 37 bulls this winter.
HIGHLAND LAKE FARMS
R. W. E. Burnaby, (Farm at Stop 55, Yonge Street Radial) Jefferson, Ont.

LYNDALE HOLSTEINS
One 13-months-old Bull—Sire, May Sylvia Pontiac Cornucopia (¾ brother to Champion Echo Sylvia Pontiac) whose two grandams are K.P. Pontiac Lass, 44.18 lbs. butter in 7 days, and May Echo Sylvia, 41 lbs. in 7 days, 132 lbs. milk in 1 day. Dam of bull offered—Pietie Inka Pietertje, Jr. 4-year-old; butter in 7 days, 30.77 lbs.; 30 days, 124.34 lbs.; milk in 1 day, 102½ lbs.; 7 days, 696 lbs., 30 days, 2796 lbs.
BROWN BROS., LYN, ONTARIO

Build



BEFORE you build your barn or house, how much money here are the "Metallic" Roof and Tin Stormproof and Tin "Eastlake" Galvanized "Empire" Corrugated "Metallic" Ceiling (for inside use) "Metallic" Brick and Clapboard "Acheson" Roof "Balitus" Ventilator "Empire" Silo Roofs. We guarantee to save you money. Our goods are proven superior.



"Metallic"

Keep Your Live and in prime condition feed LINSEED OIL CAKE

With a trial ton order write "The Veterinarian," the diseases of cattle. THE CANADA LINS... Toronto and

JERSEYS and

Twenty-Five Years Breeding CHAMPIONS for large yearly milk production. We bred, and have in our champion Berkshire boars improvement, write us for prices. HOOD FARM, L.

AYRSHIRE

are good breeders easy feed. WRITE W.F. CANADIAN AYRSHIRE Box 513, H.

Fernbrook

Young bulls for sale (one from one to fifteen months) closely to the world's champion May Mischief. COLLIER BROS., B. (OXFORD)

LAKESIDE AYRSHIRE

A choice selection of your Record of Performance dam. SIRE: Auchenbrain S many times grand champion. Fairfield Mains Triumph the noted Hobland Perfect. Write for catalogue. Geo. H. Montgomery, P. Express Building, Montreal. Manager, Phillipsburg, Q.

JAS. B. ROSS, MEADOW

for high-producing, show Herd headed by SNOW K two-year bull at Toronto, anything in Yorkshires. Meadowvale P. O.

SUNNYSIDE AYRSHIRE

We have, at present, the s bulls we ever offered—1 by 1 by Sunnyside Matchless—present herd sire, Sunnyside JOHN W. LOGAN, HOWL

D. M. W.

For imported or Canadian-bred females, get my prices. Write me wherever shown. Write me care of. St. Louis Station. Kelo Farm R. O. P. Ayrshire by Palmston. Speculation had a stronger line-up of R we have at present. Our are sure to please. D. A. MacIntosh, G. T. R., Athelstan N.

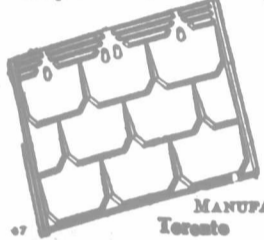
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We have bred over one half the world's Jersey champions for large yearly production at the pail. We bred, and have in service, the two grand champion Berkshire boars. If you need a sire for improvement, write us for literature, description and prices.

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AYRSHIRE COWS

are good breeders, rich milkers easy feeders.

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CANADIAN AYRSHIRE BREEDERS' ASSN.
Box 513, Huntingdon, Que.

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

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Meadowvale P. O., Streetsville Station

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We have, at present, the strongest lot of young bulls we ever offered—1 by Hobsland Masterpiece, 1 by Sunnyside Matchless—and the others by our present herd sire, Sunnyside Masterpiece.

JOHN W. LOGAN, HOWICK STATION, QUE.

D. M. WATT

For imported or Canadian-bred Ayrshires, bulls or females, get my prices. My importations win wherever shown. Write me for one animal or a card.

St. Louis Station, Que.

Kelso Farm R. O. P. Ayrshires. Herd headed by Palmston Speculation Imp. We never had a stronger line-up of R. O. P. producers than we have at present. Our 1917-1918 young bulls are sure to please. D. A. MacFarlane, Cars Crossing, G. T. R., Athelstan N. Y. C.; Kelso, Que.

Gossip.

The Horkstow Manor Lincoln Flock.

The writer made a second journey to this flock to complete his selection of Lincoln yearling rams for Mr. H. L. Finch, of Soda Springs, and in so doing spent February 17th in looking carefully over the flock, examining not only the stud sheep but also the yearling sheep, from whence he selected ten rams born in 1917, which are unexcelled in merit and quality, breeding and pedigree, by any that have been exported to North America. He also inspected the lambs, practically the whole of which had fallen by that date, and found the flock, which is comprised of all Dudding blood, to be in splendid condition.

"The proof of the pudding is in the eating" it is said, and this assertion is proved by the fact that practically no sheep have been lost during the winter—under one per cent. No stronger confirmation of the strength, healthfulness, and vigor of constitution can be given than this.

The weather has been favorable and warm, the ewes have a grand lot of milk, another indication of their constitution and healthfulness. The foresight and excellent management of the holding is shown by the capital supply of food of all descriptions, both for present and future use, and consequently its owner can look forward with every confidence to being almost independent of the short supply of purchased foods which the war, unfortunately, is bringing into effect.

Those who are fortunate enough to inspect Mr. Finch's notable shipment, which is leaving England—which has been specially selected on his behalf by W. W. Chapman—will find that of the ten rams selected there are two by Riby Gordon 150 guineas, six by sons of this noted ram. What has this ram done? In the first place he was second-prize winner as a two-year-old at the Royal Show, and his progeny—this is important for that which they have done once they can do again, and will do in your show-yards—include Riby Perfect Model, the first-prize and champion ram at the Royal Show in 1915, after he had been used as a sire in the Horkstow flock in the previous year. He was exported to Buenos Ayres, and sold for 3,000 dollars. At the same Royal Show, 1915, two other sons by Riby Gordon 150 guineas won first and second prizes in the single-ram class, and two others formed part of the first-prize pen of five.

We may remark here that it was at this Royal Show that the Horkstow Manor flock broke all previous records, so far as regards the Lincoln breed, at the Royal Show of England for its representative sheep—and there are none better in this respect—won all the first prizes and the champion prizes in the yearling and the two-year-old ram class.

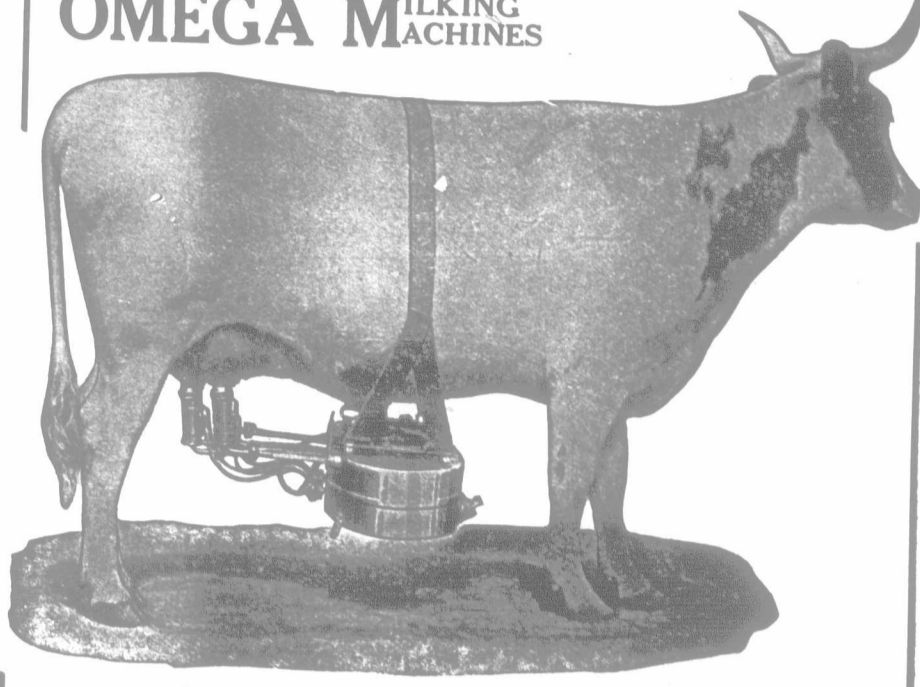
In view of the future demand from North America, which is bound to be big, for none appreciate good stock better than your flock-masters, we would remark that Riby Leconfield General 2nd, like the previously mentioned stud ram, was also a second winner at the Royal. He has a considerable number of progeny in the flock at the present time, and sired in 1916 some of the first-prize rams at the Royal Show, and he was also sire of the top-priced Lincoln yearling ram sold in the year 1917 in England.

Then we have the get, both in the yearling age, and amongst the lambs, of Pointon 260 guineas, a ram that was in the first-prize pen at the Lincoln Show and Sale in 1916, where he was purchased by Mr. Nicholson at the top price of the day, 1,336 dollars. Then there is a beautiful lot of lambs by Horkstow Manor Masterpiece, the picked ram of last year's produce.

The writer was particularly struck with the yearling rams and ewes. There is a magnificent lot of them, and no one could do better than get stud ewes from here, as well as stud rams, for it must be remembered that the Horkstow Manor flock is the only flock of pure-bred Dudding sheep, and Lincoln breeders all over the world will agree that no flock has ever equalled the record that the late Henry Dudding established as a breeder and exhibitor of Lincoln sheep.

Another point, and this a very important one, is that whereas in England the value of the Lincoln breed as the largest producer of mutton and wool is known, it is these characteristics that are making the breed not only the most

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The Omega milking machine draws the milk from the teats by a gentle alternating motion similar to hand action and conducts it to the pail through short, stiff, transparent celluloid tubes. The pail and the teat-cups are suspended from the back of the animal. The pail cannot be knocked over and the milk spilled, and the teat-cups cannot fall to the stable floor and suck up straw, or manure. The Omega is

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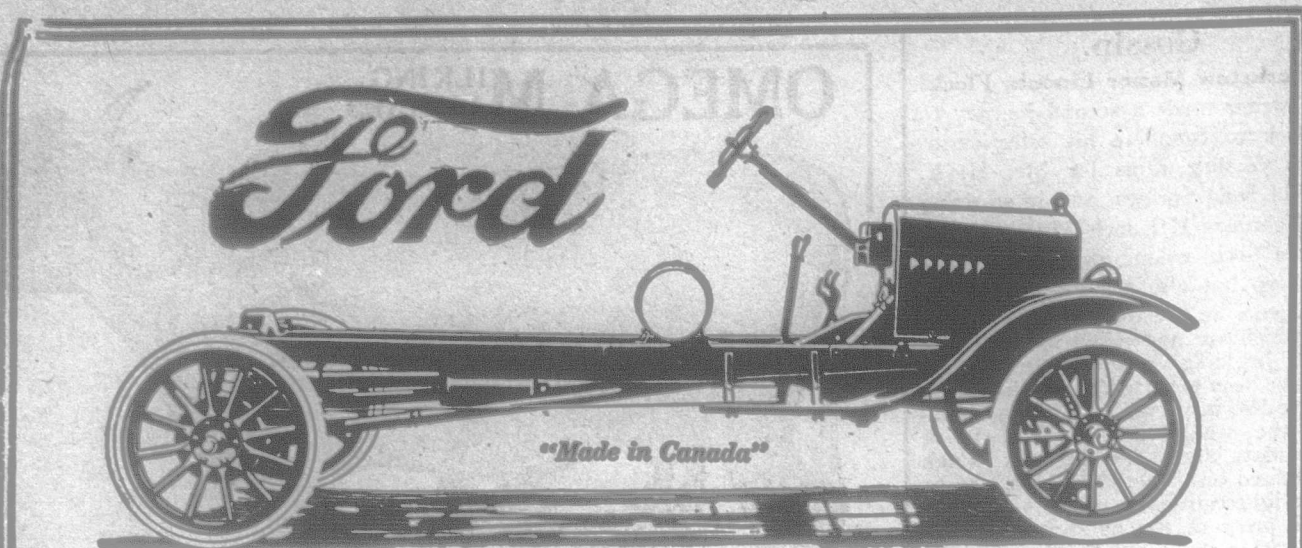
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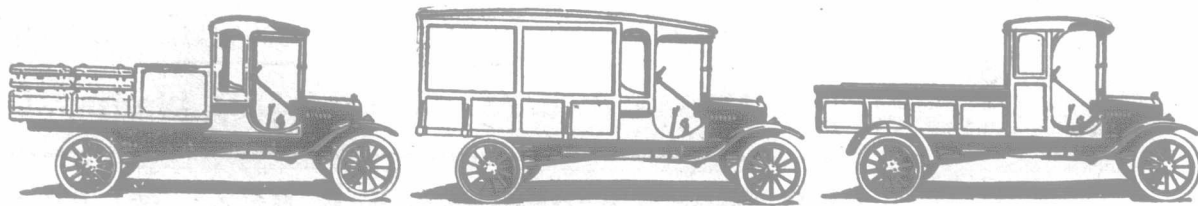
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BEAVER MEDI CHESTER WHITES won over 75% of the prize money at Toronto this year with three herds showing. Write us for bred sows or young boars. We guarantee satisfaction. We also have Percherons. Wm. Roberts & Sons, Peterboro, Ontario

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Young sows bred for spring farrow and a nice lot of young boars for sale. Write: John W. Todd, R. R. No. 1, Corinth, Ontario

Morrison Tamworths and Shorthorns—Bred from the prizewinning herds of England. Tamworths, both sexes; boars from 2 to 12 months. Shorthorn bulls from 5 to 10 months old, reds and roans—dandies. CHAS. CURRIE, Morrision, Ont.

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When writing please mention Advocate

popular, but the most profitable breed of sheep to keep throughout the world. Nicholson's flock is a full and typical specimen of this breed. He has a wonderful and progressive demand for his sheep. This means that purchasers are satisfied, and we may remind our readers that he has not only a big lot of selected yearling rams and ewes of his own breeding for sale, but he has also secured the option of the pick of six leading flocks, all of which he knows have been using valuable Dudding strains of blood up to date.

Questions and Answers.

Miscellaneous.

Belgian Hares.

Can you kindly inform me where I could obtain any Belgian hares? Several of my school pupils have been asking for them, to raise and so help the meat situation. I await your reply.

L. E.

Ans.—The only answer we can give is to place a small advertisement in the Farmer's Advocate.

Succession Duty.

1. If a married man with children dies without a will, will his property be taxed by the Government?

2. If taxed, how much?

3. Would the widow and family be allowed to go on and do as they wished?

4. Would the widow have any trouble getting money out of the bank that would be there in his name?

Ontario. L. E.

Ans.—1 and 2. Not in under \$25,000 in value.

3 and 4. For various purposes—including the withdrawal of the bank deposit—it would be necessary to have an administrator appointed by the Surrogate Court. One of the family could act in that capacity if in a position to give the requisite security by way of bond with sureties to the Surrogate Judge.

Administration of Estate.

1. A man dies without a will, leaving an estate of farm and stock and implements, etc. He leaves an aged wife and several married children. They appoint an administrator, but he does not sell the estate nor divide the property for a number of years. Can the administrator sell the estate without the heirs each signing away their right in it?

2. Can the widow will her share of the estate to whom she pleases after the administrator is appointed and before the property is divided?

3. If the estate is sold and the money is not all paid down, but is left in the place as a mortgage and the administrator pays off some of the heirs—they signing away all right and title in the property, the rest of the heirs leaving their shares in the mortgage. The widow leaves hers also, and dies without a will. Can the children who received their share get a share of the mother's share of the estate, or only those who have not signed away their right in the estate?

Ontario. M. S.

Ans.—1 No.

2. Yes.

3. The children in question would be entitled to shares of their mother's estate.

Gossip.

In a report of the Guelph Pure-Bred Stock sale, Viewbank Hope was reported as having sold at \$207. This was a typographical error and should have read \$270.

Great Prices for Guernsey Cattle in England.

Godfrey Oakey's sale of Guernseys in England on February 20th this year shows the increased values in all breeds of live stock. Two years ago an average of £40 all round (for little yearlings are included in these averages as well as grown cattle) would have been a great figure. This year the average was £64 9s. 10d. for 57 head—a cow making 160 guineas and her little calf a month old 19 guineas, and a yearling heifer made 130 guineas. The herd consequently realized £3,676 0s. 0d. on a farm which was only 135 acres in extent.

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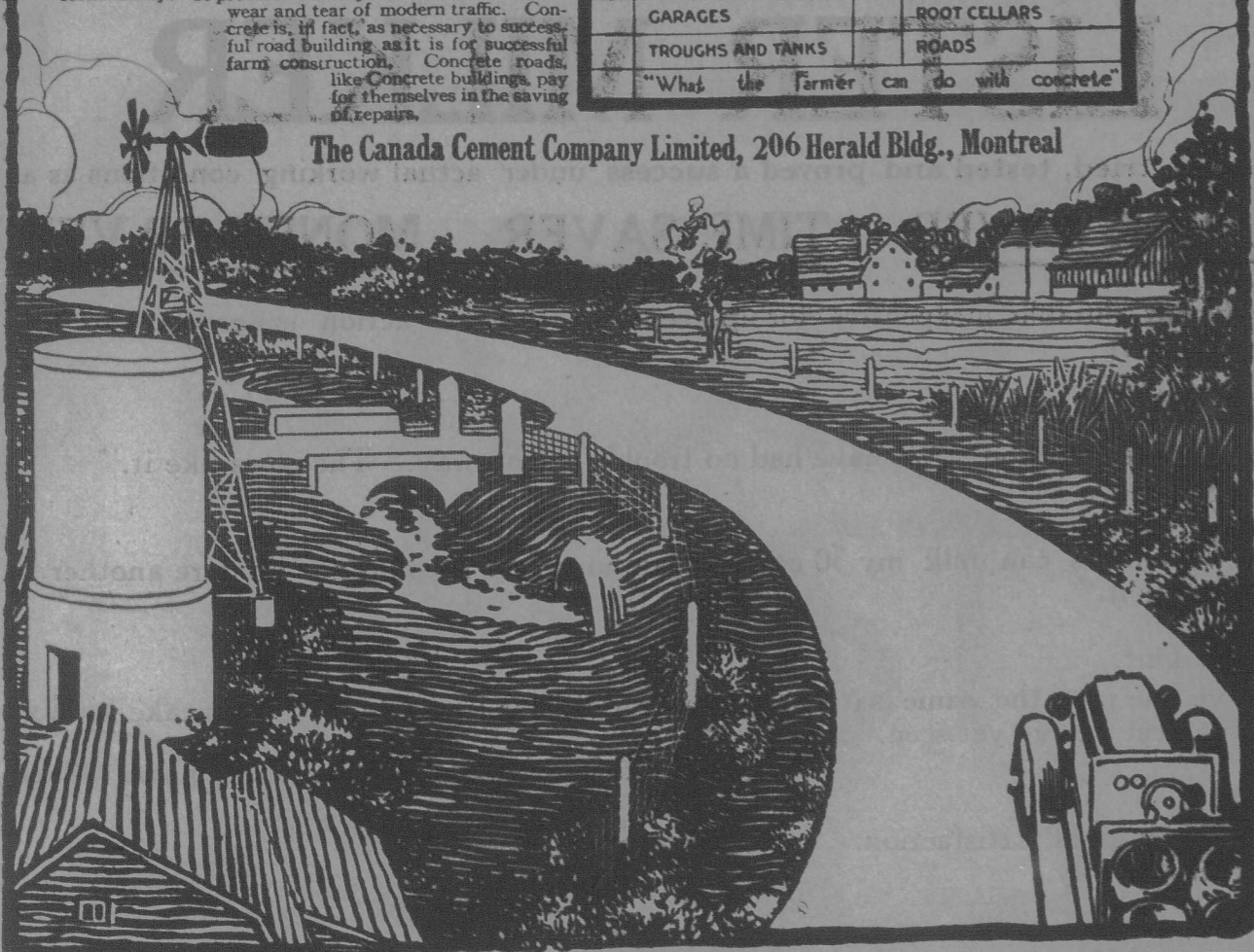
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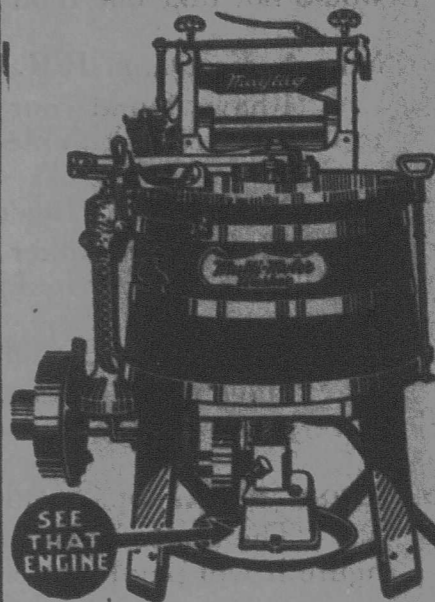
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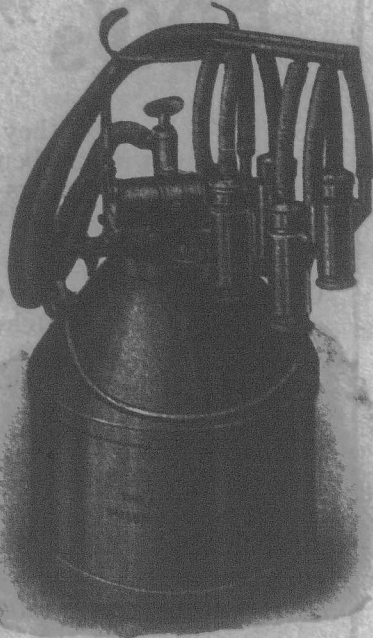
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