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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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Vol. LIII.

LONDON, ONTARIO, JULY 25, 1918.

No. 1348

To Save Wheat



for our soldiers in the trenches, The Canada Food Board has been compelled to insist on the use of substitutes for wheat flour.

Use the Best.

PURITY OATS

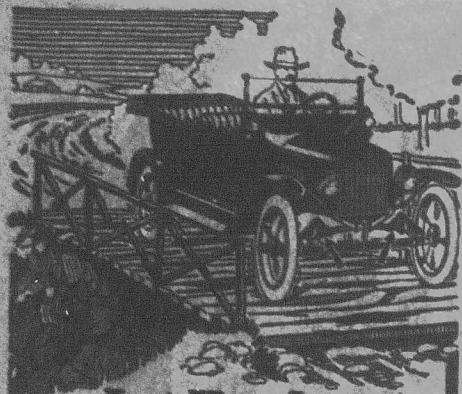
when used in all your baking in conformance with the new food regulations produces delicious bread, rolls, cakes and pastry.

Wheat-saving recipes free on request

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Canada Food Board License Nos.—Flour, 15, 16, 17, 18. Cereal, 2-009.



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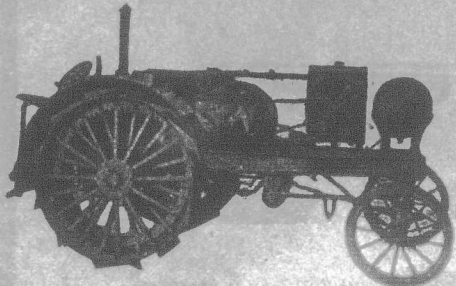


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The Three-Plow Tractor for Ontario.
The Tractor that makes good.
The Tractor that has stood the test.
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The asbestos-lined copper gasket on each porcelain shoulder is a patented Champion feature that guarantees long life and ensures perfect performance under hard usage.

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Light in weight, easy on the feet, wearing like iron, these boots meet the needs of the farmer better than any other boot on the market. Made in the general style of a moccasin, from selected hides, tanned by our FAMOUS CHROME-OIL PROCESS. The leather used in them is soft and pliable and gives with the movements of the foot. Built on right and left lasts, with counters and soles, they are neat and give utmost support to the feet. They are as nearly waterproof, too, as boots can be made, and the Chrome-Oil Process of tanning keeps the leather from shrivelling up, hardening or cracking.

They'll give you greater comfort, satisfaction and wear for your money than any other boot made.

Shipped postpaid at the following prices:
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Waterproof Paste per tin, 25c.

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The Old Reliable Firm, in business a quarter of a century. References—Any Bank.

For Men, Boys and Women



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of a hard day's work should wear

ELLAN RM BOOTS

the feet, wearing the needs of the boot on the marble of a moccasin, by our FAMOUS The leather used gives with the tilt on right and soles, they are sort to the feet. of, too, as boots ne-Oil Process of m shrivelling up,

comfort, satisfaction in any other boot

Following prices:

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Height required, 5 ft. 2 in. JOEPACK CO. Toronto, N. B.

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well-secured 7 are Stock. The ed by a mort- 5,000,000, of a ader company. ore than four ents. A new l, will increase

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ONTARIO

You can get all the

Harvest Help You Want

By applying for it now

The results of the recent Man Power registration are at the disposal of the Ontario Government Agricultural Representatives and the Public Employment Bureaux. These give us the names of a large number of willing and experienced farm workers.

These figures show that about one-third of the men now resident in towns and cities were either brought up on a farm or have had previous farm experience; and a large number of them are willing to assist in gathering the harvest.

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If you want help, all you need to do is to apply to your Agricultural Representative and tell him the kind of man you need; when you want him; for how long; and what you are willing to pay. The Agricultural Representative will get a man for you, or if he hasn't one available, he will refer your inquiry to us, and we will see that you are supplied.

Or you may fill out and mail the coupon below and address it as indicated, and we will deal with your application, through your Agricultural Representative, or we will send you a man direct from headquarters.

The main thing is: don't be backward about asking for help.

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The Agricultural Representative in your County, or to the nearest Zone Employment Bureau.

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APPLICATION FOR FARM HELP

Ontario Government Public Employment Bureau

Trades and Labour Branch Dept. of Public Works

Date..... Fill in your telephone number here or the nearest neighbor's telephone number.....

Signature of Farmer..... Post Office..... County.....

How to reach place of employment.....	Acres to farm.....	What kind of farming practiced? Mixed..... Fruit..... Dairy.....
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Mark (X) after help required

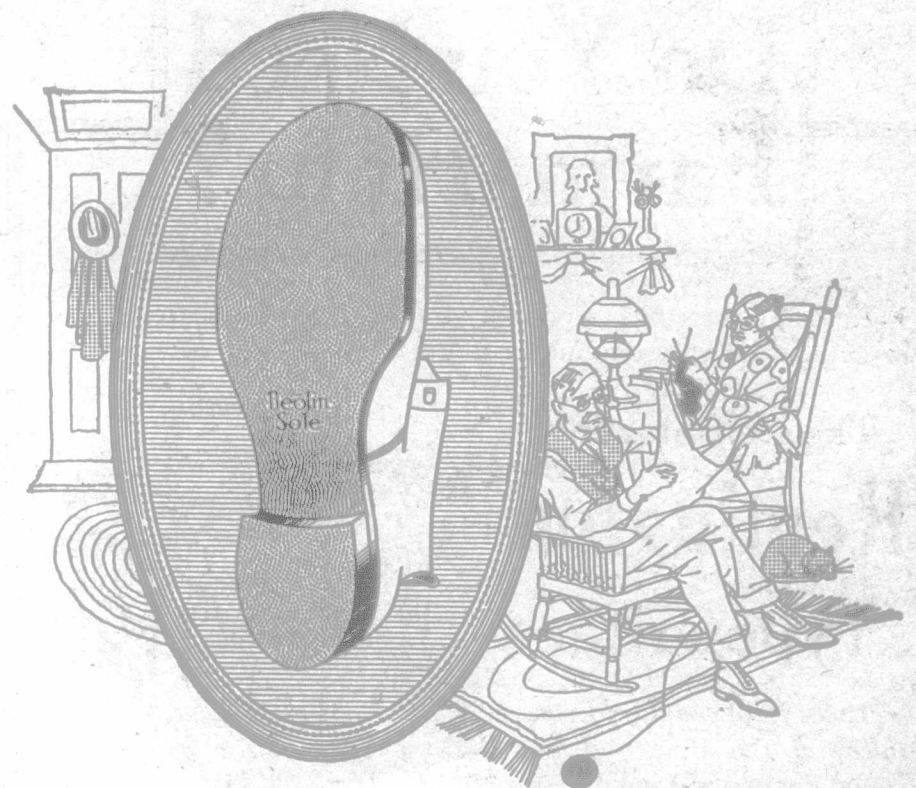
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Issued by the Labour Committee, Dr. W. A. Riddell, Chairman Organization of Resources Committee Parliament Buildings, Toronto



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To stand the hard work of the farm, farmers have worn boots so heavy and stiff that they hurt their feet. They had to, to get the wear.

NOW, heavy work-boots are made *pliable* and *comfortable*.

They are made with Neolin Soles.

These boots bend with the foot, and make walking easy. Still, they have the weight and thickness to bear the rough usage and protect the feet.

And soled with Neolin they give *longer wear*.

The farmer can be good to his feet without increasing the year's shoe-bill. He actually saves money on these comfortable boots—through longer wear.

In the 'last two years, millions have proved this true.

Canadians alone buy thousands of pairs a day. They have learned how much they can save by buying comfortable Neolin Soles.

Get new work-boots and Sunday shoes with Neolin soles. Get Neolin half-soles for your old shoes. There are several thicknesses of Neolin for new shoes.

Put boots on your feet that are easy to walk in, that will keep out the wet, that will outwear the best boots you ever had.

Look for the name "Neolin." It is stamped on every genuine pair.

The Goodyear Tire & Rubber Company of Canada, Limited

Neolin Soles

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Farm help is scarce, but one way to overcome the scarcity is to make your own time count for more.

The Self-Starting Remington Typewriter

will save from one-third to two-thirds of the time you now spend in pen-writing letters.



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The Remington Typewriter

is easy to learn to operate, and the whole family can use it.

Let us send you our latest booklet, "How the Typewriter Captured the Family." It will place you under no obligation and a postcard with your name and address will bring it to you.

Remington Typewriter Company

(INCORPORATED)

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saves those bearings. It is highly refined, free-running. Gets to the revolving parts; does not gum; prevents seam rust. Just as necessary for your separator as a special oil for your automobile. It is made for the purpose.

Sold in pint, quart, half-gallon, gallon and 4-gallon cans; also barrels and half-barrels. By reliable dealers everywhere.

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BRANCHES THROUGHOUT CANADA

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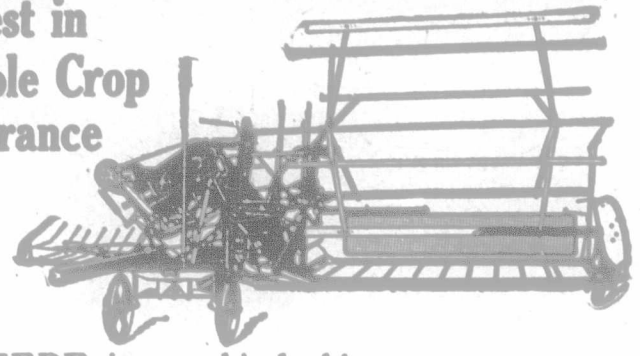
The Great-West Life Company issues policies to meet every need. Rates are low—conditions liberal—and the profits to policy-holders are remarkably high. Ask for information, stating age; there will be no impotunity to insure.

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Dept. "Z." Head Office: Winnipeg

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THERE is one kind of insurance you may not know about, which requires no premiums, on which you realize every year, and which this year is fully as important as any other insurance you carry. When your crops are ready for cutting, McCormick binders and twine insure the harvesting of the whole crop. No matter whether the grain be heavy or light, tall or short, standing or down, lodged and tangled, a McCormick binder cuts and binds it all without waste. That is what we mean by whole crop insurance.

McCormick harvesting machines and binder twine, always efficient, are better than ever this year, when every bushel of grain is needed. Remember this when you come to buy your binder and twine for the season's work. Remember, too, that the larger sizes conserve labor. Buy the largest binder you can use, and buy a new machine if there is any question at all about the efficiency of the old one. A new McCormick binder is absolutely reliable.

You can be sure of having your new machine on time by placing your order with the local dealer as soon as possible, or writing the nearest branch now for catalogues. The dealer will appreciate having your order early so that he can give some service to your neighbors who delay. And the world will appreciate it!

International Harvester Company of Canada, Limited

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Mortgage Corporation Debentures do not fluctuate in value. Neither time, panic nor war affect them.

Stocks drop. Some disappear altogether. But through all the excitement and strife of war, Standard Reliance Debentures have stood the test for security of principal and permanency of interest.

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Our prices will advance 33% on August 10th, next. Order received up to that date filled at present low prices.

Renew the life of your old wagon at small cost. "COOKE" wheels are giving satisfactory service all over Canada. Made to fit any size axle or skein, old or new. One of the greatest labor savers for the farm.

Write to-day for illustrated circular and price list, together with free chart, showing how to take measurements correctly, and booklet of testimonials from pleased customers. Remember we quote prices delivered to your nearest station, no matter where you live!

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The Farmer's Advocate and Home Magazine

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LIII.

LONDON, ONTARIO, JULY 25, 1918.

1348

EDITORIAL.

The unprofitable hens should be discarded from the flock now.

Hog feed is scarce as well as high in price. The standard hog feed now on the market should help to relieve the situation.

The past weather has tested the water supply and the power which provides it. An unsatisfactory water supply is a great inconvenience.

This is the season of the year when the ice supply is appreciated. Up-to-date dairying is now impracticable without ice except in rare cases.

A large percentage of city dwellers have received their first lesson in farming, hoeing in their own gardens. Many of them could now do similar work on the farm.

It is more difficult to get a cow back to a normal flow of milk after she has once decreased than it is to maintain production with green feed, etc., during a dry spell.

It is plainly evident that potato seed should not be selected from the bin entirely, field selection and the destruction of all diseased plants in the seed patch is the only safe way.

With a large percentage of our Cabinet Ministers in England the people will begin to think over there that Canada is an easy country to govern. However, conditions are such here that Canadians think those ministers should be home.

The agriculturists of Eastern Canada are looking forward to the time when they will know the Hon. Mr. Crerar better than they do now, and when the Minister of Agriculture will enjoy the same popularity east of the Great Lakes as he does in the West.

At least one session of the District Representative Conferences should be devoted to an experience meeting when the men from all the counties could tell the Government what farmers are thinking and doing. This would be beneficial to all parties concerned.

The recognized ability of the dairy cow to use roughages economically has placed her in the forefront as a producer of food in war time. No effort should be spared to secure for her an abundant supply of good feed for the coming winter. Attention given now to the alfalfa, clover, corn and root crops will result in roughages of better quality with which to carry on the business of milk production.

The high prices being paid by consumers for fresh fruits so far this season do not mean that the fruit grower is getting rich on account of the war. Most of the fruits that are so high in price are very light crops and very high prices are necessary before the grower can even meet the cost of production. Moreover, it is doubtful if the grower gets, on the average, more than forty to fifty per cent. of the retail price.

The problems that must be faced and settled before either a Dominion or a Provincial Dairy Council can be formed are of such magnitude and importance that every dairyman and every breeder of pure-bred dairy stock should give them his serious consideration. Much that will be helpful can be accomplished at the annual meetings to be held next winter if those in whose interests the councils will work have previously given the matter some careful thought.

Live Stock Plans at Guelph.

Live stock men throughout Ontario, and even in other provinces, will no doubt be interested in the announcement, appearing elsewhere in this issue, made by Prof. Wade Toole, Head of the Animal Husbandry Department of the Ontario Agricultural College, concerning his plans laid for work at the Institution. The good work of the Animal Husbandry Department at the College, under the supervision of Prof. G. E. Day, has been recognized the world over, and Prof. Toole has a sound foundation, laid by his predecessor, upon which to build. Conditions, however, are constantly changing and the time appears ripe for the Department to branch out and widen its sphere of investigation and research along lines which were, perhaps, less worthy of attention in the past. This will necessitate the inclusion of a more complete representation of the various breeds in order to do justice to all classes of live stock, as well as to the students and visitors to the College farm. The O. A. C. is looked to for first-hand information, more now, perhaps, than ever before, owing to the critical situation arising out of the abnormal times through which we are passing. In the future, and especially after the war, the live stock industry will be such an important factor in the economics of this country that it should receive every possible consideration looking to the strength and stability of the same. All investigation, research or extension work requires funds with which to carry on, but the financial condition of the country demands that all expenditures be made carefully and wisely. Nevertheless, fairly generous appropriations are being made for agricultural advancement, and the Hon. Mr. Henry, the new Minister, would do well to consider seriously the needs of the Institution at Guelph, which has made for itself an enviable reputation and which we are all anxious should be maintained.

Hints to Fall Fair Directors.

It will not be long before the fall fair season will be upon us and agricultural societies will have passed through another set of experiences, and will have added another year to their already long and useful existence. There is great danger, however, that institutions or organizations of this kind may get into a rut and lose some of the fullness of their opportunity, unless the management in the persons of the Secretary and the Board of Directors are keenly alive to their responsibilities and the forces in the community which may be made to serve their useful purpose in bringing the yearly event to a successful conclusion.

The fall fair is essentially educational, both agriculturally and socially, and the wise director or secretary will ever bear this fact in mind. The social influence comes primarily from the opportunity afforded the people of the community to mix with one another under congenial circumstances and to see that this opportunity is utilized, fair boards must provide such attractions as will bring the crowds and make the occasion pleasant. Too much reliance is placed on horse racing by many fair boards, and even more regrettable are the cheap variety shows, blazoned over the countryside by flaming posters of questionable taste and less inviting character. Too little attention is given to the securing of good quality attractions and many fairs are attended from a desire to meet other people, rather than with the expectation of spending an enjoyable day among the exhibits and special features provided.

The educational value of the fair is neglected to an even greater extent perhaps. Prize lists in some cases are scarcely ever revised and, as they stand, involve the spending of much money uselessly. A strong, active secretary backed by a Board of Directors, representative of the best men in the community, could, do much to influence the farming practice of the locality by main-

taining an up-to-date prize list. Useless varieties of grain, or fruit crops, could in many cases be dispensed with and substantial prizes offered for the better varieties with the extra money thus secured. Valuable assistance could be rendered in the much needed standardization of varieties by an emphasis in the prize list upon those varieties whose suitability for the soil of the district is well known and which are among the varieties recommended, in preference to those of less meritorious character.

The younger men should be encouraged to lend their enthusiasm and virile strength to the cause of the fall fair, and, once interested, they will bring with them new ideas and a decided success for the fair. A very frequent and glaring fault with many fairs is the lack of suitable accommodation about the judging ring. Indeed, sometimes there is no ring at all and the judge and his classes are shoved out of the way in one corner, supported by a mere handful of on-lookers, while the crowd watches the racing and loses the value of one of the best educative features. The fair is an opportunity for progressive competition and social development that places great responsibility upon the management. Now is the time to plan earnestly and conscientiously for its success in every department.

The Trials of the Potato Grower.

Members of the older generation who are continuing their years of usefulness on the farm often view with bewilderment the great multiplicity of pests and scourges that beset the potato crop. Comparatively speaking, those were happy days before the Colorado potato beetle became an unwelcome summer visitor, bringing with him his nefarious habits which branded him with loathsomeness along the entire trail leading from his original home in the South. Another pest, the flea-beetle, does less damage perhaps and he is so small that his depredations are committed before he is noticed; consequently this little varmint "gets away" with considerable bad work without adorning his name with the disrepute which it deserves. Then there are the early and late blight which formerly destroyed crops in seasons favorable to their spread, but we put the destruction down as an act of Providence and hoped that such visitations would not recur. Departments of agriculture in the various Provinces at last made certain discoveries and recommended that the potato beetle be banqueted on Paris green, but the equipment for applying it in the early days was not up-to-date so the grower was frequently obliged to leave his bed in the quiet dawn, even before the cock crew, in order to serve the fine green powder ere the wind came up and blew it into a neighboring field. We were then told that Bordeaux mixture would prevent the blight and this necessitated some very disagreeable labor, but with all these we were able to control the scourges already named. As the years go by, however, diseases multiply and a grower must have the knowledge of a plant pathologist to be able to identify the numerous diseases and combat them successfully. Scab, leaf roll, black-leg, curly dwarf, mosaic, fusarium wilt and rhizoctonia are a few of the maladies we hear reported this year, but there is an occasional mention of canker, warts and other minor troubles. The disappointing feature of the present situation is that infection in some of the diseases mentioned is carried in the seed, and prevention must be carried out through rigid field selection. At present, however, the Provincial Government has a large area of potatoes in New Ontario under its supervision, in order that a considerable supply of disease-free seed may be produced and distributed throughout the Province. If the growers attack this disease problem in the proper spirit there need be little fear that the industry will suffer to any alarming extent, but neglect or indifference may lead to serious consequences.

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

Published weekly by
THE WILLIAM WELD COMPANY (Limited).

JOHN WELD, Manager.

Agents for "The Farmer's Advocate and Home Magazine",
Winnipeg, Man.

1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers, of any publication in Canada.
2. TERMS OF SUBSCRIPTION.—In Canada, England, Ireland, Scotland, Newfoundland and New Zealand, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States, \$2.50 per year; all other countries, 12s., in advance.
3. ADVERTISING RATES.—Single insertion, 20 cents per line, agate. Flat rate.
4. THE FARMER'S ADVOCATE is sent to subscribers until an explicit order is received for its discontinuance. All payments of arrears must be made as required by law.
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12. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve "The Farmer's Advocate and Home Magazine," Descriptions of New Grains, Roots or Vegetables not generally known. Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
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THE WILLIAM WELD COMPANY (Limited),
London, Canada.

Co-operation Hardly Begun.

One frequently hears expressions of wonder at the rapid spread of the co-operative idea that war conditions seem to have brought about. In one branch of agriculture after another changes can be pointed out which have come easier by far since the war than was ever thought possible previous to August 1914. Farmers seem to get together with greater ease and freedom and, this done, they are willing to work shoulder to shoulder, to give and take and to "consider thy neighbor", as never before.

This is a good sign, but we have as yet barely touched the fringe of co-operation. All we are now witnessing is the willingness to co-operate beginning to make itself manifest. As an example of this it will probably be fair to take our fruit industry as an example of a branch of agriculture that has advanced further along the pathway of co-operation than any other. At least this is true in Ontario. There are probably 70 or more co-operative fruit shipping associations in Ontario, a large number of them being chiefly or even solely concerned with the apple crop. A Central Selling Agency was organized and has eked out an existence full of sorrow and disappointment, in spite of the fact that our apple industry is rapidly declining and needs a guiding hand such as a central body should be able to hold out. A strong cohesive organization of those 70 associations could do mighty things for the Ontario apple, but, instead, the tree that bears it is dying of neglect. In the Niagara Peninsula the same thing is being enacted among the tender fruit associations, except that an attempt to even organize a badly needed sales organization was unsuccessful.

Co-operation can show its true value if we stick to it. As yet we have not stuck very well; we have hardly begun to appreciate co-operation. When we do, co-operative effort will virtually revolutionize whole branches of agriculture in Eastern Canada. This is not only true as regards the marketing and distribution of farm products, but its effect will be shown in changed cultural methods.

What One Woman Did.

BY SANDY FRASER.

I hadna been feelin' quite as spry as usual for a couple o' weeks back, whatever the reason was I canna say unless it wis from readin' ower muckle bad war news this past spring. Gin it wisna that I dinna ken what it could hae been. Onyway I used to get tae botherin' mysel' by wonderin' how I wis gaein' to get all the wark done in case I kept on gettin' worse, an' the hayin' comin' on alang wi' everything else. I would lie awake for as much as half an hour some nights thinkin' about it. Then one day Jennie, my niece, sent me a copy o' a magazine that's printed in New York, and as I felt mair like readin' than warkin' oot in the hot sun the day it came, I juist stayed in the hoose an' read it frae cover tae cover. And there wis one article in it that I went back to an' read over the second time. If ye dinna mind and hae the time I'll be relatin' it to ye, maybe for yer benefit. It's a true story a'right, for the standin' o' the magazine that printed it guarantees that. It's an account o' a farm an' a farmer doon in one o' the Eastern States. Or maybe I should say "a farm an' a farmeress," because it's a woman that is runnin' the institution. There's a hundred an' twenty acres in the place, wi' sixty o' this in bush. Lots o' the farms aroon it hae been deserted by their owners wha went further west wi' the idea o' makin' money faster than they found they could in the East. It's a hard enough country an' a lang way behind the times in most ways, but the farm I'm tellin' ye about doesna' show ony signs o' the general run-doon appearance o' the community as a whole. The woman wha owns it looks out for that. The hoose an' barns are all in guid shape, painted an' repaired as often as they need it. An' the live-stock the barns shelter are as thrifty an' good-lookin' as everything else. This live-stock consists o' one horse o' about eleven hundred weight, (kept for drivin' as weel as daein' the wark, which the owner bought as a three-year-old and broke in herself), three cows, some pigs an' about a hundred hens.

Noo this woman has lived alone on this place for ten years. None o' her neebors are within callin' distance an' she does practically all the wark connected wi' the farm hersel'. For instance, in 1916 she raised fifteen tons o' hay, all o' which she mowed and raked hersel', with machinery where she could and by hand where the ground was rough. She pitched on all these loads in the field and did all the moving away in the barn. The same year she raised seventy-five bushels o' oats, daein' a' the wark hersel' except the pittin' in o' a couple o' loads. She had ploughed the land and harrowed it an' sowed it wi' no help ither than her horse.

The year before she had seventy-five bushels o' potatoes which she dug by hand and carried into her cellar alone. If she wants to break up a piece o' new land, or clear the stanes off a field, she will hire a man for a few weeks, but apart frae this she seems to hae no use for the opposite sex, except maybe as customers when it comes to sellin' her produce.

Then she has her garden that nobody ever pits a hand to but hersel'. In 1916 she grew peas, beans, tomatoes, cucumbers, beets, turnips, cabbage, cauliflower, parsnips, carrots, sweet corn; besides squash, pumpkins an' citron an' a few ither things for guid measure, such as blackberries an' apples, of which last she had sixty bushels. For a side-line, that's what ye might call goin' it pretty strong. Then she made forty gallons o' cider for vinegar, while she wis restin', I suppose. Her nearest market is seventeen miles away, so it canna be at this point that she gains ony time.

Noo this will gie ye an idea o' what wark this woman does in the simmer-time, but if ye think she tak's a sort o' half-holiday durin' the winter, as they say that maist farmers do, ye're mistaken. It seems that she graduated frae a normal school in her younger days an' noo she is turnin' her education tae guid account by teachin' in the village school, about five miles frae her hame. The term lasts for mair than half the year and she drives the five miles ilka night an' mornin', daein' her chores about the barn an' hoose before daylight an' after dark. She has been teaching for mair than twenty years. This kind o' knocks oot the idea that some o' us had that school-teachers never can mak' guid hoose-keepers. And not only has she taught school but they hae appointed her superintendent noo, which means visitin' the ither schools in the toonship an' takin' anither slice oot o' her time. Even Sunday is no' a'thegither a day o' rest for her, for they hae made her superintendent o' Sunday schools. Did ye ever notice that it is the busy person that always has time to do somethin' else? That's the way it seems tae go onyway.

Anither item in connection wi' her winter's wark shouldna be overlooked, as it amounts to mair than some farmers I ken dae, frae November to April. She hires a man to cut wood for her on the sixty acres o' bush I tauld ye about and on Saturdays an' holidays she draws this tae the landing, daein' all the unloadin' an' pilin' hersel', mind ye. Year before last she drew a hundred cords wi' her one horse, an' on her last trip hame at night she wad tak' a load wi' her, in this way haulin' her years' supply for hersel'.

Noo, as the boys say, for "goin' some" what dae ye think o' that? After I had finished readin' the story an' then thought o' the way I had been worryin' about gettin' my wark done I couldna help feelin' a wee bit ashamed o' mysel'. If a woman can dae all that that woman did I guess a man can dae all that I hae to dae, thinks I. Na doot it's mair a matter o' juist thinkin' ye can dae these things an' then first thing ye ken they're done. Na question we mak' oor job harder by worryin' about it an' daein' it twa or three times in imagination before we are called on to dae it in reality. I ken there's

lots o' the farmers in this country that are up against it hard enough, what wi' the takin' o' their boys tae the war an' their hired men tae the city, but when we read o' this woman we hae been tauld about, that naethin' in the shape o' work seemed tae frighten, I think we'll hae to admit that oor ain case is no worse at ony rate, an' maybe juist a wee bit better. She seemed to be the kind o' person that did what she could and what she couldn't dae she didn't waste her energy worryin' about. But I'm not goin' to be drawin' morals for ye from her story. If there's ony there ye can get it for yersel', the way I did, and I hope it may dae ye as muckle guid.

Nature's Diary.

A. B. KLUGH, M.A.

Gardeners are sometimes troubled by a couple of beetles which attack asparagus, the Common Asparagus Beetle, and the Twelve-spotted Asparagus Beetle. The Common Asparagus Beetle is a handsome insect. It is slender and graceful, blue-black with a red thorax (the middle division of the body of an insect), and lemon-yellow and dark blue wing-covers with a reddish border. It is about one-fourth of an inch in length. The larva ("grub"), is dark gray or olive in color. The pupa, or resting stage, is yellow.

This insect is injurious in both the adult and larval stages. Early in the season they sometimes render the tender shoots unfit for market and later in the season they destroy the leaves of the high-grown plants, particularly the seedlings, the roots of which become weak when their foliage is destroyed. In the case of this plant the beds cannot be cut until the third or more usually the fourth year, and during this time they are particularly exposed to the attacks of this insect.

The Common Asparagus Beetle passes the winter in the adult state under some shelter, such as in piles of rubbish, sticks or stones, or under the loose bark of trees. In May the beetles issue from their winter quarters and lay the eggs for the first brood. The egg is very large in proportion to the size of the beetle, as it is nearly one-sixteenth of an inch in length. It is elongated and of a dark brown color. The eggs are deposited endwise upon the stem or foliage, and they hatch in from three to eight days. The larva when full-grown is soft and fleshy, much wrinkled, with a shining black head. It has six legs at the anterior end, and in addition has a pair of anal prolegs, and a pair of foot-like tubercles on each segment. When mature the larva enters the earth, and transforms to a pupa. In from five to eight days the adult beetles emerge from the pupa-case.

There are fortunately a good many natural checks upon the undue increase of this species. Predacious insects of many kinds attack and devour the larvæ— lady beetles, a wasp known as *Polistes pallipes* and a small dragon-fly, being among the most efficient of these. The Asparagus Beetle is very susceptible to sudden changes in temperature, and it has been noticed that immense numbers of the hibernating beetles are killed in winter when a severe cold spell follows open weather. Intense heat also seems to dry up the eggs so that they do not hatch.

There are several means by which this pest may be combatted. A cultural method which has proved efficient is to cut down all plants, including seedlings and volunteer growth in early spring, thus forcing the beetles to deposit their eggs upon new shoots, which are then cut every few days, before the eggs have time to hatch for the first brood.

It has been found that in hot weather the larvæ may be killed by brushing or beating them from the plants during the hottest part of the day so that they drop to the bare ground. They are very delicate creatures and as they crawl very slowly, very few of them are able to regain the shelter of the plants but die thus exposed on the hot earth.

Another method which has been proved efficient is to dust the plants with fresh, air-slaked lime early in the morning when the dew is still on them. All the grubs which the lime comes in contact are at once destroyed. The use of arsenicals on the plants at the time when they are being cut for market is, of course, out of the question, not so much on account of any danger of poisoning as because of the whitish deposit which would be left on the shoots and thus spoil their appearance. After the cutting season is over, however, the most effective method of control is spraying the plants with a solution of two pounds of dry lead arsenate to fifty gallons of water. The adhesiveness of this solution is greatly increased by the addition of two pounds of resin-fishoil soap. It is interesting to note, in view of the fact that lead arsenate is now largely superseding the older Paris green, some experimental comparisons of these two arsenicals reported by the U. S. Department of Agriculture. It was found that when Paris green was used, only fifty per cent. of these insects were killed, when lead arsenate was used ninety per cent. were killed, and when lead arsenate and resin-fishoil soap were used a hundred per cent. were killed.

The Twelve-spotted Asparagus Beetle, sometimes called the Red Asparagus Beetle, is in some localities more troublesome than the common species. It is orange-red in color, with six black dots on each wing-cover. The larvæ of this species live within the ripening berries of the asparagus. Most of the damage is done by this species in early spring, as at this time the adult beetles which have just emerged from hibernation attack the young shoots.

The methods used in controlling this species are the same as those used against the Common Asparagus Beetle.

THE HORSE.

Fitting Horses For the Show-Ring.

The success of horses in the show-ring depends upon different factors, such as type, condition, style, action, speed in certain classes, and manners. The prospective exhibitor must first decide the class in which he will exhibit. This depends upon the horse's type, size and action. The only difficulty the exhibitor has in classifying his horse of any of the draft types is to decide whether his colt, single horse, or team should be shown in the agricultural or draft class. The horses of these classes are identical except in regard to weight. In the larger shows 1,600 lbs. is considered the minimum weight for a draft horse, and those between 1,400 and 1,600 lbs. are agricultural horses. In many of the rural exhibitions the minimum for the draft horses is 1,500 lbs., and below that to 1,300 lbs. are agricultural. In these classes it will easily be seen that a few pounds more or less of flesh may change a horse from one class to the other. In the lighter classes of horses it is often more difficult to classify. In classifying between the *light harness* or *road horse*, and the *heavy harness* or *carriage horse*, more difficulty is often experienced. In such cases action is the main factor. Of course we recognize certain types as roadster type and certain types as carriage type, but we often see two horses of similar type and probably of similar breeding that while standing look like a well-matched team, but when in action one shows fairly typical carriage or heavy harness horse action, and the other fairly typical roadster or light harness horse action. In each case action must decide irrespective of type and size. In the saddle class, type will, in most cases, decide, as a typical saddler seldom disappoints us in action. He has action peculiar to his class, rather close to the ground, elastic and springy, not the flash action of the heavy harness horse, nor the speed of the light horse, but an easy, graceful, rather low but safe action at all paces. The combination horse is a medium between the saddler and the heavy harness horse in action, hence he gives reasonable satisfaction in either saddle or heavy harness.

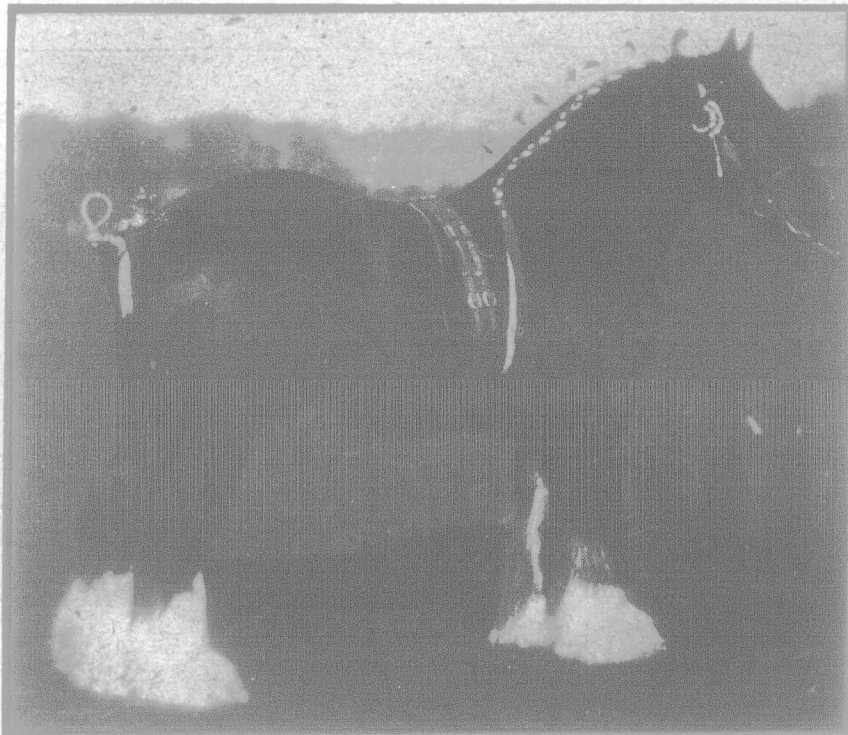
In preparing a horse or a pair for show purposes it is necessary to decide the class, and during the preparation the driver or rider should endeavor to intensify the peculiar characteristics of style and action demanded in the class. The general condition of the horse, as regards flesh and coat, can be acquired by careful feeding and regular grooming, provided he is not ridden or driven enough to keep him low in flesh. Excessively fat horses, even in the heavy classes, do not show as well as those in only moderate flesh. The too-common idea that it is necessary to give drugs to horses in order to properly fit them for show purposes is a mistake, and its practice often harmful. A healthy horse needs no drugs to put him in show condition. A reasonable amount of good hay, oats, bran and a little linseed meal, thorough grooming at least twice daily, and regular exercise, but not sufficient work or exercise to tire him, will soon get him in condition with a good coat and sufficient flesh. During exercise pains should be taken to make him as perfect as possible in the desirable style and action demanded in his class. In the heavy classes, of course, it is important that he be a good walker, and go well at a slow trot, that he backs well, and stands well.

In preparing the heavy harness or carriage horse considerable care should be taken to ascertain the proper weight of shoe, for both fore and hind feet, that he requires to cause him to show in as extreme a degree as possible the intensive flash action desired. In order to do this it is sometimes necessary to change his shoes a few times. The horse that goes high, straight, flash and fast with shoes of ordinary weight is preferable to one that requires a lot of iron to make him go properly, but the function of the trainer is to "make him go right," even if it be necessary to wear heavy shoes. This horse should also be taught to walk well, and he should show the flash action noted when either jogging or going fast, and, of course, the faster he can go the better, provided the quality of action is desirable. Manners in this class are very important, as he is essentially a pleasure horse. He must be taught to back well and stand well, and at all times retain his attractive appearance. The road or light harness horse should also be taught to back, walk, and stand well, and to show as much speed as possible at the trot. He should not wear heavy shoes, neither are boots or toe weights allowable, and he should not show the excessive and flash action of the heavy harness horse; while manners are not so important as in the carriage horse, they always count for considerable in the ring.

Saddlers should be taught to respond readily and promptly to the will of the riders, whether expressed by hands or knees. He must walk, trot, and canter well, and change gaits promptly at the will of the rider.

He must not lug on the bit nor yet appear afraid of it. He must stand well and show good manners. Probably the judge is more annoyed by want of manners in the halter classes than in either harness or saddle classes. This occurs especially in small exhibitions. In many cases, yearlings, two-year-olds, or even three-year-olds, are brought into the ring apparently without having had the slightest education. The animal plainly shows a want of both fitting and training. Conditions indicate that he is not being exhibited with the idea of educating the public, or lending glory to either the exhibitor or the society, but from the fact that the exhibitor has the idea that he can win a little easy money without much trouble or expense. When the judge asks him to lead his entry out to show action, the colt refuses to go, the exhibitor often uses a whip, which usually makes matters worse, and altogether the exhibition of the animal is a poor affair, and inclined to cause the judge to "say things." As a simple matter of fact, the exhibitor who takes an uneducated animal into the show-ring should not be considered in the awarding of prizes, notwithstanding the quality and general characteristics of the animal. It is not uncommon to see an animal of high class type and general characteristics, but very green, and refusing to show what he is capable of doing, beaten by a much inferior animal in a general way, but one that has some manners and has been trained to lead properly. Such circumstances often subject the judge to adverse criticisms, but we do not think that a judge is justified in giving a place to an animal on account of his type and general characteristics indicating that he can perform the functions of his class, but will not. It is necessary that he show the judge his ability to do so, in order that he be entitled to a place above his plainer competitor that performs well.

WHIP.



Marden Dagnum.

Junior champion at the Shire Show, England.

Grade Stallions to be Eliminated.

The Stallion Enrolment and Inspection Act which requires that all stallions be enrolled and come up to a certain standard of quality and that grade stallions shall not stand for service after 1918, has been a good thing for the horse business and has improved the quality of horses raised in many counties. It is rather surprising that in Ontario there were 640 grade stallions in 1917, but this is only about half of the number on the road in 1914, thus showing that they have gradually been replaced with registered stock. There has been considerable opposition from some quarters concerning the enforcing of the Act regarding grade stallions and the question was discussed at a meeting of horse breeders and Agricultural Representatives recently held in Guelph. The general opinion was that the grade stallion must not be permitted to stand for service. It is regrettable that so many owners of mares are so shortsighted, that for the sake of a few dollars they will breed their mares to an inferior horse and then be forced to take from \$50 to \$100 less for the progeny than they could have received had it been sired by a good stallion. The Act may be slightly interfering with certain men's business, but it is to their interest and to the interest of the horse industry. There will, no doubt, be sufficient high quality horses available next spring to replace every grade stallion now on service. Let there be no backing up of the authorities regarding the enforcing of the Act.

The meeting was presided over by Wm. Smith of Columbus, and Dr. Grenside, Peter Cristie, W. Richardson, Prof. Toole, C. F. Bailey, W. Jackson, W. Smith and W. J. Bell were among those who spoke on the question. Mr. Bell confined his remarks principally to the formation of horse breeders' clubs. He has had experience in organizing a club and claimed that they have proven to be a splendid help to horsemen in his district. The speaker emphasized the importance of clubs getting a good horse.

LIVE STOCK.

Canadian herds are carrying off a share of the honors on the Western show circuit.

Going in debt to secure a good herd header has started some breeders on the road to success.

At the Shorthorn sale of D. Warnock & Sons, at Loveland, Col., an average of \$1,281 was made on 37 head.

Owing to shortage of shipping, Great Britain is reported to be somewhat behind her schedule of meat shipments to France.

Don't allow the lambs and shearlings to lose in flesh at this season. It will take less grain to keep them up now than it will require to put on the flesh in a couple of months' time.

According to information sent out by the Canada Food Board, the Allies' live stock has been decreased to such an extent as to mean 27.7 per cent. of home resources in meat.

Wool growers of Manitoba have taken advantage of the co-operative marketing plan more this year than in previous years. Upwards of 400,000 pounds of wool will be marketed, as compared with 168,048 pounds marketed in the same manner in 1917.

Prof. Barton, of Macdonald College, Quebec, has tried a number of fly repellents on the College herd, but has not found any of them perfect. However, the absence of the warble fly in the herd is believed to be due to regular spraying of the stock during the fly season.

Thornby Premier, a red roan dairy Shorthorn bull recently sold in England for 2,000 guineas. His sire is Drusus, tracing back to Darlington Cranford 5th and that great cow Dorothy. He is out of Dolphinlee Primrose, a cow which produced 10,238 pounds of milk in her first lactation.

While the brood sows will keep in good breeding condition on fresh clover they require a little grain if the pasture becomes parched or scarce. Strong, thrifty litters will not be produced if the sows are failing in flesh towards the latter part of the gestation period.

It is reported that Denmark's stock of swine has been reduced from 2,500,000 head at the beginning of the war to 400,000 head at the present time. In normal times Denmark was a heavy exporter of bacon to England. Her depletion of stock gives Canada an excellent opportunity to increase her exports to Great Britain.

Train and Condition the Stock for the Fall Show.

It is impossible to properly fit and train an animal in a week or even a month so that it will appear to good advantage in the show-ring. Lack of fitting and training certainly shows stock at a disadvantage. The big breeders whose stock are in the limelight to-day commenced years ago to prepare their animals for the shows. By this we mean that they selected the foundation stock that would make a good impression in the show-ring and that should produce progeny worthy of winning the red and the blue in the keenest of competition. It is necessary that good breeding be behind the show herd if a favorable impression is to be made. Breed type and character are desired in every animal, and to get these the breeder must use judgment in choosing the sire to mate with the females of his herd. Size, substance and quality are also kept in mind by the breeder when selecting his show stock. At the large fairs the stuff is brought out in the pink of condition and is usually well trained. Such is not the case at some of the local fairs, where too many of the animals are only in field condition. The show-ring, to a large extent, sets the standard for type, and it is regrettable that at the smaller fairs such a low standard is so often set. It is an offence against the public who attend the fairs to have the stock brought out as it sometimes is, and it is rather humiliating to the breeder to have high-quality animals and yet lose the coveted prize because he neglected to look after the details in fitting his stock. While preparation for the show-ring should have commenced many months ago, there is yet time to make a marked improvement on the animals to be shown. After selecting the animals to go into competition, the breeder should exercise his ability in fitting and training those animals. It may cost a little in extra feed to put them in show-ring condition, but it will pay, and a few hours spent in leading the animals and getting them to stand just right will be time well employed.

Exhibiting stock at either the small or large show is an education. It permits breeders to compare their animals with entries from other herds. It gives them an opportunity to see more clearly the weak and strong points in their own animals, and so aids them in making improvement for the following year. It very often happens that the weak points in an animal do not show prominently until brought alongside of other stock. Every young man might advisedly look up the prize

REPEATED

list of his township or county fair, and, if he has a good individual animal that is eligible to enter any of the classes, commence preparing it for the show this fall. If the man does his best in fitting and caring for the stock, he has nothing to be ashamed of if he does not win. All entries cannot stand at the top of the line-up; there must be a loser, and the man who takes a defeat graciously and finds out wherein his animals failed to compare favorably with other entries will, no doubt, come back to the fair stronger than ever in the following years.

The watchful experienced eye of the herdsman counts for a good deal when fitting an animal. It is a study to learn how to get the depth of flesh, mellow skin and glossy hair on the beef cattle. This cannot all be secured with one feed, but requires a combination of feeds. Plenty of grooming and rubbing adds lustre to the outward appearance. No detail should be overlooked that would make the animal more attractive to the judge. Size for the age is important, but any degree of roughness in the entry is a handicap. The animals should be well fleshed, and there is a good deal in the individuality of that animal as to whether or not the flesh will be laid on smoothly or patchy. Such feeds as good clover or alfalfa hay to supplement pasture, and concentrates, such as oats, bran and oil cake, will be found very acceptable to the animal. Roots and silage are also excellent feeds for putting cattle in show-ring fit. Overfeeding is a serious mistake, consequently the herdsman must use his judgment.

Washing and combing improve the condition of the skin and quality of the hair, and using the brush adds gloss. Use of sandpaper will improve the appearance of the horns, and rubbing them with flannel cloth and a little oil will add a polish. Exercise and training are essential in preparing the stock for the show-ring. An animal that will not stand cannot be properly compared with other entries. At too many of the local fairs the cattle are not even halter-broken, but are turned loose into a yard and the judge must pick his way through a bunch of cattle of different ages, in order to make comparisons for the animals in any one class. This does not give the judge an opportunity to do his work, and it is a reflection on the management of the fair that he should be called upon to labor under such a handicap.

Hogs do not require as much fitting as cattle and sheep. True, they should be in fair flesh, and careful feeding is necessary so as to keep them thrifty and yet not throw them off their feed. Strong, heating feeds should be avoided, unless in combination with green feed or roots. Finely-ground oats and middlings, with skim-milk, make a very good ration for hogs up to four months of age. If a paddock containing clover or rape is available, it will make a splendid run for the show herd. Care should be taken to always keep within the appetite of the hog. When selecting the show herd, uniformity in size and conformation should be considered. Exercise is very essential and if the hog does not take exercise of its own accord he should be driven around for a certain length of time each day, as this tends to strengthen the legs and pasterns and as a result the body is carried more gracefully. Washing the hog occasionally helps to put the skin in good condition. It removes the scurfiness and makes the skin soft and the hair silky.

As a rule the hog is a stubborn animal, but by exercising patience it is possible to train him so that he will be on his good behaviour in the show-ring. It is well to take each individual entry and practice having it stand correctly. If this is done several times the hog will undoubtedly stand to better advantage on show day than if training of this nature had not been done.

Many choice sheep have been placed low in the line because of failure on the part of the shepherd to fit them properly and then exhibit them to advantage. As with the other breeds of stock, breeding counts for a good deal. The show flock should be made up of individuals that are typey, of good breed conformation, smooth, thrifty and well balanced, with no pronounced defects showing. Care must be taken in fitting so that the body will be filled out with flesh and not tallow, and that the wool fibre will have a lustre and the skin the proper tint. Oats, bran and oil cake, with clover or alfalfa hay and cabbage, rape or kale, will serve to make an ideal ration for sheep.

The appearance of the sheep can be improved a good deal by trimming the fleece. This is an art and is only acquired through practice. The shepherd who does the work must have in his mind's eye the picture of a perfect specimen of the breed, so that he may have the animal on which he is working conform as nearly as possible to that type. Training is necessary and exercise will develop muscles which are slightly weak so that the animal may stand properly on its feet while the judge is doing his work.

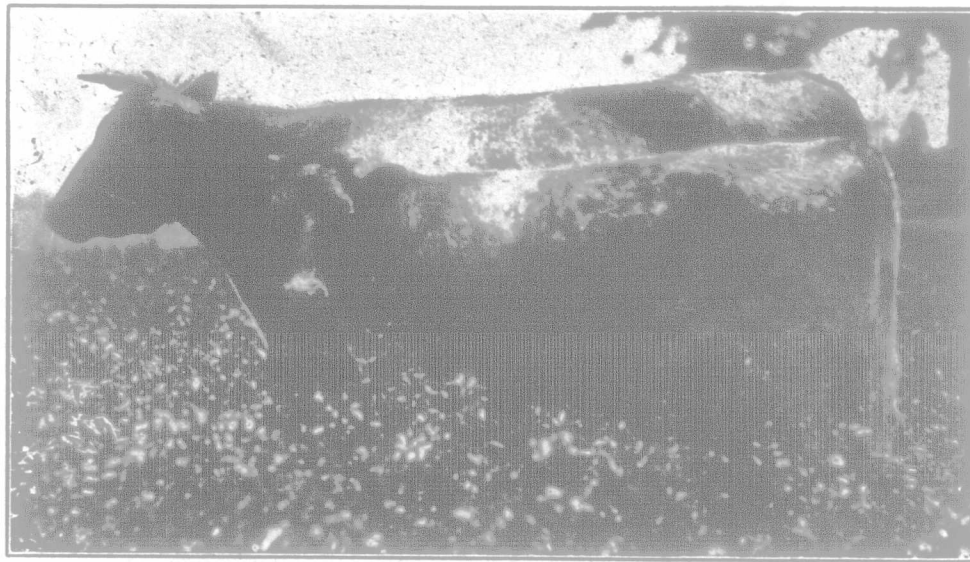
With all classes of stock slight weaknesses or defects may be obliterated or largely concealed by exercise and training beforehand, and also by having the animal pose in the show-ring. It may require considerable practice to get the animal to stand as you would like, but all our domestic animals are susceptible to training, and if the herdsman or shepherd has time and patience enough he can train the animal to stand as he wants it to. The value of training is in evidence in every show-ring. The entries from some herds will come into the ring and stand just so, paying no attention to the visitors on the ring-side; other entries will be restless, continually moving about, and seldom standing to the best advantage. Judging is a matter of comparison of the animals as they stand in the ring, consequently the herdsman should do all he can to have his entry appear at its best.

Good Experiments With Live Stock to be Conducted at the O. A. C.

At whatever work a person is engaged it is essential to success that a well-defined plan of procedure be mapped out and followed as closely as circumstances and conditions will permit. At a meeting of the Agricultural Representatives, recently held at the Ontario Agricultural College, Prof. Toole, head of the Animal Husbandry Department at the College, presented an outline of some of the work he had in mind for his Department, and we believe that all live-stock men will concur with his plans, as the work in mind should give valuable information to them and be of great benefit to students at this great institution of agricultural learning.

Testing for tuberculosis in cattle has been done regularly, and reactors have been found in the College herd. These have been isolated and cared for by herdsmen other than those looking after the main herd; however, the barns being in close proximity there was always great danger of this infectious disease spreading. The beef herd is clean and it has been decided upon and approved by the Minister of Agriculture to dispose of the reactors in the dairy herd and remove what has for some time been known as the T. B. barns.

As accommodation is not sufficient at the College for constructive breeding of every breed of stock the small herd of milking Shorthorns is being transferred to the Government farm at Monteith, where a very good herd has already been established. It is generally recognized among breeders that the College Shorthorn herd composed of such fashionable families as Augustas, Lavenders and Roan Ladys is as good as any in the Province, but as the Hereford and Angus breeds are not as well represented either in numbers and quality as they might be, it is in the best interests of the institution that four or five choice females of both breeds be purchased as the foundation for a herd of each breed.



Beach Ridge Lovely and Her Heifer Calf.

Feeding on sweet clover on Weldwood Farm, near London, Ont.

Owing to the danger of bringing infection to the beef barn by the purchase of steers for fattening, Prof. Toole has the following experiment in mind: To purchase at the end of July, 15 young calves, three pure-breds (steers), three cross-breds, three grades by pure-bred sires, three dairy-bred calves (pure), three scrub beef calves, keep account of all expenses in raising, stable and feed all alike, keep monthly records of individual gains and cost of same up to the time they are two years old. The idea is to market each lot at the same time on the Toronto market, and arrange to follow the carcasses to the packing house in order that the relative value may be determined. An experiment on a similar basis is proposed to be started next year so that the College will have a stable of feeders coming on each year. The object of the experiment is to prove or disprove the value of breeding in beef production, to prove or disprove that beef type is a factor in the economics of beef production; to prove the value of the pure-bred sire in beef production; to show relative costs of producing beef from beef calves, dairy calves and scrub calves; to get figures on the cost of raising calves to weaning age, and the gains made by different types under similar conditions; to get material for class-room work, and to increase the output of beef from the farm at least cost.

Extensive experiments with sheep were also outlined. As there has been more or less difficulty in keeping the College flock healthy, it has been decided to make a sheep run on the highest part of the farm and follow a rotation of crops for sheep pasturing. Constructive breeding is to be carried on with one long-wooled and one short-wooled breed, and then keep several specimens of the other breeds for class-room work and to show breed type and conformation to students and visitors. Some feeding experiments are also planned. The idea is to purchase 24 thin lambs on the Toronto market late in September, eight to be wethers, eight ewes and eight bucks. These are to be run in three lots and fed on the same class of feed, keeping accurate individual weights of the lot every week. When the lambs are finished they will be marketed on the Toronto market at the highest price obtainable, and if possible the carcasses will be followed to the packing-house in order to make further study. An experiment of this kind

followed up will prove or disprove the statement that it pays to finish lambs, and also that buck lambs for feeding purposes should be castrated. It will also show relative gains in wether, ewe and buck lambs and will give some conception of the spread in price necessary on each group to make it pay to finish lambs. Records of gains in lambs on certain feed will also be determined.

For the benefit of students and visitors to the institution a special wool exhibit is being fitted up in the basement of the Animal Husbandry building.

The intention of the Department is to keep the Yorkshire and Berkshire herds of hogs for breeding purposes, and then have representatives of the other breeds for class-room work and to show type. Experiments will be conducted to show value of pasture for pig feeding. In order that good work may be done a new piggery is long past due. It is not fair to the students nor to the institution that work be carried on in the class of hog-pen now at the College. An up-to-date piggery is an immediate necessity.

While the College owns four teams of choice Clydesdale mares of varying ages, no colts have been raised of recent years. On the average farm a mare or two is bred each year, and they are called upon to do a portion of the farm work besides raising a foal. Why should not the same thing be done on the College farm? Prof. Toole has had a number of mares bred, but the horse barn does not afford sufficient accommodation for raising many colts, consequently, it is to the interests of the institution to have a new horse barn erected.

The head of the Animal Husbandry Department expressed his desire of having at least one Percheron team at the College, and of keeping the best draft stallion available for use on the College mares and for the benefit of the breeders of the community. A new judging pavilion with a slaughter house attached is considered a necessity if the students are to get the most out of their course. Boys who leave the College halls to go back to the farm or to go on professional work

should have some experience in slaughtering animals and cutting up the carcasses.

Exceptionally good work has been done by the Animal Husbandry Department of the College, but at present the herds and flocks are somewhat depleted, and some of the breeds are not well enough represented to enable the staff to do their duty by the students.

The experiments and other plans mentioned by Prof. Toole are in order, and we believe them to be the best interests of Canada's greatest agricultural institution. The College is looked to for advice and service, but this cannot be furnished in the high-

est degree unless proper equipment be supplied. The constructive policy outlined by Prof. Toole should meet with the approval of live-stock men and agriculturists as a whole. Money is required to do this work, and a generous appropriation should be made available immediately in order that the experiments be gotten under way with the least possible delay.

The Government cannot afford to permit this institution to fall back in its service to the country for lack of funds to carry on constructive work. Ontario is an agricultural Province, and the College is depended upon to give the latest and best methods in crop production, handling crops, the feeding of stock, combating animal and plant diseases, etc. Experimental and constructive work in the various Departments is necessary if the College is to hold the enviable reputation it has attained the world over.

Barley Smut Poisoning in Cattle.

BY PROF. WADE TOOLE, O. A. C.

In view of the fact that annual pastures mixtures are now quite commonly used in Ontario and that barley forms a part of many of these mixtures it might be well to sound a note of warning regarding smut in this feed. In some fields smut of barley is very prevalent this year and if the barley is headed out there is danger of smut poisoning in the cattle. The symptoms of the disease are rather vague. Cattle may scour, become weak on their legs, and finally go down with what appears to be paralysis, death ensuing very suddenly from spasm of the pharynx and smothering. The poison affects the nervous system and the heart as well. Cattle go down and cannot rise. Evidently the smut is more dangerous with cows about to calve or immediately following calving. Anyone having cows on annual pasture containing barley heading out and in which there is considerable smut should take them off to avoid danger of loss. There is little danger where the pasture is cropped off to such an extent that few or no heads appear. After a heavy rain which would wash all the smut away so that the leaves of the grain were free from it cattle could be returned to the pasture in safety.

Sheep Breeders' Meeting at Guelph.

A meeting of Ontario Sheep Breeders and the Agricultural Representatives was held in Guelph on July 16. During the morning a visit was made to the wool-grading warehouse, and the process of putting up wool for shipment, receiving it at the warehouse, grading it, packing it, and checking up the individual shipments in preparation for paying the wool grower was fully explained by R. W. Wade and his staff. Upwards of three-quarters of a million pounds of wool have been received at the Ontario grading station at Guelph. This has been sold through the Canadian Co-operative Wool Growers' Association along with the wool from the other provinces at a very remunerative figure.

The Ontario Sheep Breeders provided an excellent banquet for upwards of one hundred guests, at which Dr. Creelman was toast master. Hon. Geo. Henry, M. P. P., recently appointed Minister of Agriculture, was present and gave an interesting address in which he complimented the wool growers on the good work they had accomplished and encouraged the co-operative marketing movement. Jas. Douglas, of Caledonia, President of Sheep Breeders' Association, gave a resume of the grading work since its inception.

In 1917 only 1,500 wool growers marketed their wool through the grading station, while in 1918 there were 3,450. The County of Wellington led in number of sheepmen sending in wool. The growers were advised to send in their applications early and to carefully follow instructions regarding tying up the fleece and shipping so as to facilitate the work at the grading station and to lessen risk of errors being made in the accounts. A greater percentage of the wool went into the higher grades than was the case last year, which showed that better care had been taken of the flocks and of the fleece.

W. A. Dryden discussed the work of the Canadian Co-operative Wool Growers' Association and explained how the wool was sold direct from grower to manufacturer at the highest price and at the least possible expense. The provincial organizations centralize the clip of the province and prepare it for market, while the Co-operative Association do the selling and provide credit so that the grower receives a percentage of his money at time of shipment and before a sale is made. It is encouraging to note an improvement in quality of wool which the speaker mentioned as being due to the use of better sires and to the care and feeding of the flock. Mr. Dryden considered the increased dog tax as being insufficient for the prevention of dogs worrying sheep, and suggested that every dog in the county be tagged so that the owner could be found and made responsible for loss. This he believed would do a good deal towards the elimination of the cur and the housing of the good dog at night.

The Manager of the Co-operative Association, T. Reg. Arkell, gave a resume of the wool-grading scheme from the time it was started, leading up to the

formation of the Co-operative Association. About four and one-half million pounds of wool will be handled through the Co-operative this year, and the Ontario clip has been sold to Canadian mills.

The estimate of receipts of wool from the Provinces are as follows: British Columbia, 600,000 pounds; Southern Alberta, 1,250,000 pounds; Northern Alberta, 600,000 pounds; Saskatchewan, 700,000 pounds; Manitoba, 400,000 pounds; Ontario, 700,000 pounds; Quebec, 380,000 pounds; Maritime Provinces, 400,000 pounds. The Ontario prices are: medium combing, 76½ cents a pound; low medium combing, 73½ cents; low combing, 67 cents; clothing, 63½ cents; coarse, 60½ cents. It is believed that the wool from Quebec and Maritime Provinces will run a little higher in price owing to there being less shrinkage.

THE FARM.

The Agricultural Situation in Britain.

EDITOR "THE FARMER'S ADVOCATE"

It can be declared openly and frankly that the whole of Britain's agricultural policy is being changed—if not actually reconstructed. The prime move to plow up so many thousands of acres devoted to grassland, and go to stock raising in the main, has been attended with considerable success and has been attended, or followed, by many other alterations in our systems. First, an agricultural wages board has been set up, with a central office in London and branches in all the counties. Wages of the agricultural laborer have been fixed at thirty shillings per week—a double rise for some laborers in a few counties. To meet this heavy additional cost upon production the Government has fixed its prices for all cereals—establishing a minimum and a maximum which will slide up and down according to a set principle.

The yield of the 1917 harvest has more than justified the changed conditions brought about by the Government, although it is due to the farmers to say that 95 per cent. of them loyally fell in with their schemes and wishes. The remaining five per cent. either went out of cultivation or else had their lands entered and someone with grit and backbone put in to work the derelict land at a profit. The difference in yield of the cereals and potatoes in 1917 as compared with 1916 was one of 4,000,000 tons and was a very welcome asset and greatly alleviated the difficulties of the situation in feeding the nation. In view of the fact that the active intervention of the State to increase home production had become only partially operative in time for the harvest of 1917, and that its full effects will become much more apparent in the harvest of 1918, it may reasonably be

hoped that the food problem will not again be so acute and anxious as it was between the harvest of 1916 and that of 1917.

As well as bringing all that is good out of agriculture during the war, a scheme of reconstruction has been evolved for settling soldier colonies on the land as small holders, i.e., holdings from three to ten acres in size. There will be bigger holdings to be run as experimental farms and training farms—a phase of farming instruction Old England has been woefully weak in in days gone by, for the simple reason that the British farmer "kidded" to himself that he knew it all and he hadn't any need to go to school to learn how to spread muck on a field for he learned that as a boy, when his father gave him threepence a day as pay during his school holidays.

If I read the future of British agriculture aright, more small holdings for practical farm laborers will be made by the Government. We have in the past had two or three schemes for putting men on the land as small farmers, but they have failed because the men who got them were not allowed to buy them but merely had to pay a yearly rental to the County Councils, which bodies had charge of them. Now if those schemes had been so made out that the land became the property of the tenants, or their children, in forty years' time, it would have deepened the interest of the workers and given them an ideal to struggle for—ownership as against mere tenancy. Then again some of the young men who got hold of the holdings so created, had no experience and they kept out the genuine clients, the farm laborers, stockmen, and others who had struggled for years on a miserable pittance, a few shillings a week and a dingy cottage very often condemned by the sanitary authorities. But times are also changing and these experienced farm hands are to have their chance of going on to the land as small-holders. They are to have good clean and sound cottages built for them, and they can bring up their invariably large families in decency. The orchards here seem to be well fruited, although the story is not the same in the Midland Counties of England. Cereals promise to be a good crop all round this year. Roots are having rather too dry a time of it, but the potato crop promises to be a bumper one. Allotments are to be seen everywhere, on every spare scrap of land and here and there a pig in his sty—raised by enthusiasts to meet the food situation bravely and with profit. England is still at heart an agricultural nation, despite its industries and its maritime trade. The most ancient of industries and the most far-reaching of all British industries—agriculture—is in for a much needed revival. It has languished long enough. It was nearly down and out. Now it has its tail well up. We are going to produce more of our own food. We are not going to be reliant upon the Hollander with his margarine and the Dane with his bacon and his butter. We can make all those things ourselves if we are encouraged, and we are being so assisted by the Government.

ALBION.

Canada's Young Farmers and Future Leaders.

From Producer to Consumer.

It has been stated by various speakers and writers that the percentage of the final selling price of farm products which the farmer receives, varies from 35 per cent. to 50 per cent. Rarely, if ever, have men dared to say that more than half of what the consumer pays reaches the farmer. Isolated instances of certain products might and doubtless can be found where such might be the case, but, generally speaking, the percentage is below rather than above 50 per cent. For years the unrest among farmers has been very pronounced owing to this very condition of affairs, but until recently not much has really done been to remedy matters. The very fact that farming is more or less of a family proposition has made it practically impossible to inaugurate steps which would rapidly bring about a satisfactory adjustment in the way of an increased percentage to the producer of the retail price paid by the consumer. At the present time, so far as opportunity for money making in farming is concerned, conditions are better than they were a few years ago, but a great many farmers are finding it difficult to take advantage of the opportunity. Consumers are not slow to see the increase in prices paid for farm produce, but utterly fail to realize, in the main, the small chance the farmer has of greatly profiting by these prices. Consequently, the cry is raised and carried from one consumer to another that farmers are to blame for the increased cost of living. Even before the war this sentiment was evident in all our cities, but very unfortunately for the farmer, the war has, in addition to creating conditions which baffle his very effort to circumvent them, added the irony of fate to an already intolerable situation and increased the denunciations from the consumers to a dangerous extent.

Mere denials of even mildly excessive profits are of no avail; they serve to excite fresh bursts of frenzy and so we come to the conclusion that it is better to ignore than to deny even a palpable falsehood. But can the condition be remedied from the standpoint of the producer. Efforts have been made in past teachings of co-operation to point out how co-operation among producers could and would lower prices to consumers. Perhaps it would, but admirable as such a condition of affairs would be for the thousands of toilers in our cities, there are other things of more immediate concern to the farmer, which it behooves him to look to first. The farmer's first object is to see that he secures for his labor a fair share of what the consumer pays; it is for the con-

sumer to see that he does not buy in the dearest market. There is no selfishness in this attitude on the part of the farmer, since if he does not look after his own interests, no one else is likely to, unless the backwardness of the farmer is likely to affect the pocketbook of the other classes and then efforts of a sort will be forthcoming. The average consumer need never be expected to help the producer; in fact it would not be logical to expect him to do so. His purpose is to get produce as cheaply as possible just as it is the farmer's hope to get more for what he raises.

Because of a prejudiced opinion of farming, consumers blame the producer for the high cost of living, but as someone remarked a few years ago "it is not the high cost of living from which he is suffering but the high cost of stupid living." Frantic efforts are being made in urban centres now to reduce the cost of living by a reduction in the amount of "service" demanded of the retailer. Frequent deliveries of small parcels, telephone orders, quick service and other attentions of like nature demanded by the city dweller, are beginning to assume a place in the cost of living schedule. "Cash and carry" stores are being established and the retailer, quick to sense retrenchment on the part of his customers is just as quick to take advantage of every fad. Naturally this is beginning at the wrong end, just as some farmers think the Government should right some wrongs that could be better righted by themselves. Co-operation would help the consumer just as it has helped the farmer in many cases, but getting together is perhaps even more difficult among consumers than among producers. As an example, however, it may be stated that in 1909 the retail co-operative societies in Great Britain did a total business of \$700,000,000, in round numbers, upon which there was a net saving of more than 15 per cent, or approximately \$98,000,000. The English Co-operative Wholesale Society, a consumers' organization, made in 1911 a profit of nearly \$2,900,000, or 2.07 per cent. of the turnover, or a little more than the maximum profit allowed the Canadian pork packing plants at the present time.

There are equal savings to be made by co-operation on the part of producers and there is no need to quote one or more of the many examples which could be quoted to prove the point. The chief difficulty is, first, to get producers to stand together long enough to reap the benefit of co-operation and, in the second place, once co-operation has begun to return a cash dividend, to prevent producers and consumers from overlapping in each other's territory. Of course, we are told, the

"unnecessary middleman" must be eliminated. Very good, but it has been proven difficult in the past to pick him out from his thousands of twin brothers. There doubtless are too many little middlemen, each making a living from the producer and the consumer, but the middleman can never be eliminated. He may be controlled but it is more likely that producers will eventually hire someone to do a part of his work, while the consumer may eventually hire some more men to do the remainder of it. In any case, someone must do the work of the middleman. There has been some talk of farmers establishing retail stores to be managed by their co-operative societies. This would be a very sad mistake if it were generally adopted: it never can live long enough in a successful way to become generally adopted. Producers can co-operate successfully to such an extent as to sell large quantities of produce by wholesale; the rest of the problem of distribution is entirely up to the consumer and if he does not care to, or cannot see far enough ahead to tackle the job of retailing it to himself, it is his own funeral. For the producer to carry the business of distributing his own products past the wholesale stage would be folly and would probably be as profitless as it would be educative.

To spread and effectually put into practice the great doctrine of co-operation is a task worth the best energy of all the younger generation of farmers in Eastern Canada to-day. There is no doubt that co-operation will come in time, if conditions get bad enough to force its general adoption. At present, the circumstances surrounding the farmer are bad, but not bad enough for co-operation in the marketing of farm produce to flourish as it might. Co-operative purchase is easier to bring about and may serve to bring about initial organization, which may ultimately be used for the control of the middlemen now engaged in the distribution of farm produce.

Judging for the Standing Field Crop Competitions is now in progress, or will be shortly, in many districts. Knowing the importance of pure seed, judges should perform their work with all possible care and skill. Competitors also should remember that judges are, in the majority of cases, selected for their knowledge of injurious weeds and their ability to judge standing crops, and should abide by the award made, realizing that the greatest good can only be secured by a hearty support of any movement which will help to improve the quality of the seed grain in general use.

Automobiles, Farm Machinery and Farm Motors.

Some Things Worth Knowing.

Not once but upon many occasions we have campaigned against dirt. Nothing is more injurious to the operation of a motor car than the presence of foreign matter on or near the moving parts. In those machines which have valve springs, rocker-arms, guides and lifters exposed, dirt has accumulated in every instance where the owner or driver has not been careful to clean the car regularly. This dust and grit has become so common on a great many power plants, that the majority of the manufacturers will this year enclose the motors. Some makers have already taken this step, but nearly all of the big ones will be doing it the coming year. The enclosing of a motor does not necessarily stop or drown any noises, in fact there are certain sounds that are accentuated, but when a motor is covered up there is not a possible chance for dirt to get into any opening or to mix with the lubricant. While we are speaking on the subject of dirt, let us say that in next year's models a great many manufacturers will so construct the front fenders that they will run out to the end of the springs and also below the radiator and between the springs. This means greater provision for preventing mud striking the radiator. You can realize of course that a clogged radiator loses a large percentage of its cooling power.

One idea seems to bring up another. Speaking of cooling, let us emphasize the fact that while it is improper to have a motor running too hot, it is almost as bad to have it operating at too low a temperature. The best authorities in the automobile world state that a power plant is turning over under the most favorable circumstances when the water in the jackets around the

cylinders is just below the boiling point. You have no doubt seen a great many people put their hands upon the top of the radiator. They seem to think that this gives some indication of the condition existing in the water jackets. It is just as impossible to judge the air pressure in a tire by kicking it as it is to determine the temperature of the water in the radiator by putting your hands on the top of the radiator. There are devices on the market which, when installed, show the temperature of the water. If you desire the utmost efficiency it might be well to get one of these patent contrivances. While of very simple construction they are nevertheless accurate.

It seems an extremely difficult problem to determine the exact point at which the bearing adjustment in your front wheel is proper. You are naturally anxious that the wheels should be well regulated in order that you may get the best running quality possible and the greatest comfort. Here is a solution for the difficulty. Adjust the bearing, after each wheel has been jacked up, and carry out this adjustment to the stage where the valve stem will go to the bottom of the wheel. This is extremely simple but every confidence can be placed in the method. For some reason or other there seems to be an epidemic of wobbling front wheels this season. The result is that a great many tires are being quickly worn down to the tread. The forward motion is hard enough on a casing, but a forward motion combined with a side motion quickly chews up the rubber.

In the old days practically every person who endeavored to teach people to drive a motor car insisted that the foot should be kept upon the clutch. The idea had behind it the safety first principle. Students were told that if the foot was constantly on the clutch they could quickly and without any hesitation cut the power off from the rear wheels. Now, however, clutches

are more sensitive. This applies particularly to the multiple disc type. It is therefore poor policy to ride the clutch pedal. You not only cause slipping, but in time you may produce sufficient unnecessary wear to run up a bill of expense. When the pedal of a multiple disc clutch is constantly pressed, even slightly, the wear on the plates soon becomes noticeable, for the engine will be going at a faster speed than will be justified by the momentum of the car.

Because the economy of gasoline is of every day discussion amongst motorists, it might be well to state that twenty miles per hour is the best speed if you wish to get the most distance out of your fuel. You certainly cannot attain a high mileage per gallon of gasoline, if you throw the throttle wide open one minute and let it back the next, or if you tear around corners or dash madly at hills. Furthermore do not think that coasting saves a great deal of gasoline. In a great many instances it is much better to allow the engine to run thoroughly throttled down. The starting up again frequently uses as much gasoline if not more than the quantity saved while the motor was stopped and the car allowed to coast.

Let us say in closing that you may be interested to hear that manufacturers are thinking of cutting down the production of tires to nine sizes. A tremendous number of sizes have been produced in the past, but the future factory equipment will only include about nine different measurements. Other sizes will be made in the meantime for old models, but it will not take long to standardize all equipment. When this has been put into force, it will save motorists a great deal of inconvenience, for while it is now impossible for most dealers to carry a full assortment of tires, very few will find it out of the question to stock at least nine different types.

AUTO.

THE DAIRY.

A Pennsylvania Guernsey, Clover of Pencoyd 3rd, has recently completed a yearly record of 14,360 pounds milk, and 817.95 pounds butter-fat.

Lenawee Calamity Pet is the only 30-lb. repeater in the period from April 24 to April 30 among the 29, 30-lb. cows reported from the American Association.

Comparing this year with 1917, the cost of producing milk in England has increased, on the average, three cents per gallon. This is largely due to heavier labor and feed charges, according to "The Farmer and Stock-breeder."

The manufacture of milk is the business of every dairyman. From grains and roughages, his raw materials, he manufactures through the machinery of the cow one of the most necessary and important of all foods which are a part of the human diet.

The total production of creamery butter in the United States during the month of April, 1918, was 49,263,800 pounds from 3,032 factories reporting to the United States Department of Agriculture. This is an increase over the production in April, 1917, of 2,600,000 pounds.

It was stated recently that the average of all the cows in the United States is 1,823 quarts of milk per year, and 156 pounds of butter-fat. Prof. H. H. Dean last winter said that a dairy cow that will not make 250 pounds of butter per year is not worth keeping. They must have a lot of mighty poor cows across the line—and so have we.

Seventy-six quarts of milk in one day, 50.68 pounds of butter in seven days, 31,246 pounds of milk in one year, 1,506 pounds of butter in one year, 122,936 pounds of milk in five years, constitute world's records. It is stated that the average of all pure-bred Holsteins that have been tested for a year in the United States is more than 7,000 quarts of milk and 504 pounds of butter-fat per year, or three times as much as the average cow in the country.

Two hundred and fifty-four factories in the United States report the production of whey butter, the total production from which amounts to 333,307 pounds, an increase of 18.16 per cent. in one year. With butter-fat worth from \$800 to \$1,000 per ton, it seems like an expensive ingredient to use in producing pork. Oleomargarine produced from animal and vegetable oils decreased 26.74 per cent. in the United States from April, 1917, to April, 1918. This decrease amounted to practically 6,000,000 pounds. Uncolored oleomargarine from vegetable oils only, including nut margarine, etc., increased 891.36 per cent. in the same period, production during April, 1918, being 5,153,467 pounds, a figure which the manufacturers were enabled to reach because of very liberal and skillful advertising.

Dairy Cows Need Much Water.

It is well known among dairymen that cows in milk consume enormous quantities of water, and it is realized, too, in a general way, that this consumption of water by cows is very closely bound up with the quantity of milk produced. As evidence of the accuracy of this belief, Eckles gives the results of the milk production of three cows giving a daily average of 13, 26 and over 100 pounds of milk, respectively, in relation to the amount of water consumed daily. He found that the average quantity of water consumed varied almost exactly in proportion to the quantity of milk produced. The actual quantities drunk by the three cows were 40, 77 and 250 pounds, respectively. This author says that cows producing milk require a much larger quantity of water than growing animals or animals requiring merely a maintenance ration, for the reason that they require water for use in the secretion of the milk itself as well as in the digestion and assimilation of large quantities of feed, much of which is roughage. Evidence of this is given in the case of one of the cows referred to above. This cow consumed 77.3 pounds of water daily when she was producing milk, but when on maintenance her consumption of water dropped to 14.7 pounds. The feed ration was exactly the same, except for a difference in quantity.

These facts would seem to indicate that a much greater importance can be properly attached to the water supply for the dairy herd than many persons realize. Henry says that animals can live much longer without solid feed than without water, and an insufficiency of water in the body causes serious disturbances. These disturbances arise from the fact that the processes of mastication, digestion, absorption and assimilation are all hindered; the intestines are not properly flushed, with the result that there is a harmful accumulation of waste matter in the body. This increase of waste matter increases the body temperature and thickens the blood. Animals partially deprived of water for a long time may lose their appetite for solid food, and, in addition, vomiting and diarrhoea may occur.

It is not the purpose of this article to enumerate and enlarge upon the various functions of water in the animal body, but it should be realized that the functions are many and varied. Not the least useful is the work of water in regulating body temperature. Large quantities of heat are absorbed in raising cold water to the body temperature of the animal. This is accomplished in a comparatively short time, and during warm weather much of the excessive heat of the body is carried off through the pores of the skin in the form of perspiration. The water of perspiration, or sweat, has, as above stated, absorbed much heat in being raised to body temperature and when it passes out through the skin contributes toward the regulation of the body temperature.

In cold weather with this same factor in force, it is easy to see the inadvisability of giving cows ice cold water to drink. Warrington has pointed out that in England when sheep are being turned out on the turnip fields, they consume about 20 pounds of roots daily. These roots contain over 18 pounds of water, or about 15 pounds more than is needed. Food is required to furnish heat for the body, and in this case 11 per cent. of the nutrients in the turnips eaten were required to bring the extra water consumed up to the body temperature. In the case of heavy producing dairy cows, an excess of cold water, or even water that is allowed in proper quantity but unnecessarily cold, will require the utilization of considerable food material in order to bring it to body temperature. It is true, of course,

that cows comfortably housed burn more fuel in their bodies than they require to keep warm, so that the excess of heat generated may go to warm the cold water drunk without any waste of food taking place. Eckles says that for a cow producing 25 pounds of milk per day, one pound of corn per day is required to warm the water drunk if it is given at freezing point.

Dairy cows require more water in summer than in winter, largely because of the greater evaporation from the skin. Dry cows seem to secure plenty of water for all their needs if given it once daily, but for the heavy-producing cows the importance of pure water placed conveniently cannot be overestimated. Where cows have to go long distances for water they are not apt to drink all they need and the milk flow is thereby affected. The same holds true of water which is not pure and fresh.

HORTICULTURE.

Care of Sweet Corn.

Sweet corn is essentially a garden crop for the Northern States and Canada. It is but little grown south of the Carolinas, and then only from seed secured in the North. Outside of Canada and the United States sweet corn is practically not grown at all. By nature it is different from other corn types in that it has a very high sugar content and a very sweet taste when in the early dough or late milk stage, and is, therefore, much prized as a table vegetable at this time. Starchy matter is lacking in the dried kernel but protein and sugar replace the starch, a fact which suggests arrested development at some stage.

Sweet corn is by nature a hot weather plant and thrives in full exposure to sunlight, but potatoes and many other plants are much better able to withstand drought. Although loving hot weather, corn needs very large amounts of moisture and, failing a sufficient supply, will shrivel up and do very poorly even if it does not die outright. It is for this reason that every effort should be made to conserve moisture in the soil upon which corn is growing, and this is best done by constant or very frequent cultivation. It is important, however, that cultivation be shallow, since the roots of the corn plant are quite near the surface of the soil and deep cultivation would destroy them. It is important also to remember that the object in raising sweet corn is quite different from that sought in the raising of corn for the silo or for fodder. It is the ear of corn and not the stalk that is of value, so that the individual stalks need not and in fact are better not to be so close together. As stated above, cultivation should be frequent and shallow, quite shallow in fact toward the last of the season. On certain soils where the moisture supply does not need to be kept up by stirring, the crop seems actually to do better where cultivation merely removes the weeds and does not move the soil to any extent. It must be remembered, however, that the water requirement of the corn plant is enormous and most soils do not carry a superabundance without careful conservation by cultivation.

Sweet corn suckers quite freely, and some varieties much more freely than others. Golden Bantam, a variety of high excellence and superb quality is very commonly grown and much inclined to sucker. Some growers regularly sucker sweet corn in order to prevent the growth of too much stalk, which naturally requires much moisture and food. It is questionable, however, whether it would be profitable to sucker large areas of

sweet corn other than to remove perhaps a few of the worst offenders. It is quite a tedious process if a knife is used, but if the operation is delayed until the stalks are about three-quarters of an inch across the base, a quick downward pull on the sucker, away from the main stalk will considerably shorten the task. If the suckers are pulled slowly or carelessly, one is sure to pull out the main stalk in a great many instances unless they are very firmly rooted. Suckers from small stalks must be cut away with a knife, or even the quick pull will dislodge the root system. The advantage of suckering, if done at the right time, is that it prevents some of the suckers from out-distancing the main stalks in growth, as very frequently happens.

Like field corn, sweet corn is subject to smut, which is really about the only disease which need seriously concern the grower. The damage from smut may be as high as twenty-five per cent. of the crop although it seldom is so common as this. Nearly everyone recognized corn smut, especially from its common occurrence on field corn. It produces very large enlargements or balls which may be several inches in diameter. They may occur at various parts of the plant but usually are most numerous in the flowers, from whence the ear may become affected; at the nodes of the stalk and in the leaves. The plant is not affected as a rule until it is about a foot high, but infection may take place through any young tissue, from spores which retain their vitality for a long time in the soil. Infection may spread from barnyard manure or compost. The balls at first appear white but later on they are black and more easily seen. The remedy consists in cutting out the affected stalks before this blackening takes place; in fact, it should be done as soon as the growths are noticed so as to avoid the spread of the disease from the spores which mature later. The common practice of cutting out and throwing the stalks on the manure heap should be avoided. This merely encourages the spores to mature and spread the disease later through the manure.

FARM BULLETIN.

Conference of Representatives.

Without a doubt the 1918 annual conference of the Agricultural Representatives of the Ontario Department of Agriculture was more successful than any previously held. Beginning Monday afternoon, July 15, and continuing throughout the whole week, the program was filled with items of vital interest to Ontario agriculture. An innovation was introduced this year in that a number of outside speakers were heard upon subjects connected with country agricultural work. C. B. Smith, Chief of the States Relation Service, United States Department of Agriculture, Washington, addressed the conference most instructively and entertainingly with regard to the County Agent and Farm Bureau Association work in the United States. This work corresponds to the work of the Agricultural Representatives in Ontario, but has been much more extensive-extension work in agriculture and home economics in the United States. There are now 6,000 paid employees doing the counties of the United States; 2,500 are county agents; 1,400 are women county agents; 1,200 men and women do work in connection with boys' and girls' club work, and about 1,000 are specialists with headquarters at Washington or the various college and experiment stations. The county agent work is the key-stone of the extension work in agriculture in the United States, and \$13,000,000 are now expended annually in working out problems through this system in connection with food production and conservation. The development of the county agent work began in the Southern States as early as 1904, but developed very slowly until after 1907, when Ontario established six District Representatives. Since that time the work in the United States has passed through several stages until now the system of farm bureau associations, whereby the farmers' own problems are worked out, has become firmly established. The key-note of all the work in this connection is to help increase the farmer's labor income, and nothing is done for the farmer, or his wife either, which they can do for themselves.

In addition to Mr. Smith, J. Coryell, Assistant County Agent Leader, New York State, was present to discuss the work as conducted in his territory, and many interesting discussions took place.

Farm and Social Surveys.

A representative of the Bureau of Farm Management, United States Department of Agriculture, Washington, was also present in the person of Mr. Hawthorne, who very clearly and vividly portrayed the work of his Bureau in conducting the farm management surveys. Mr. Hawthorne detailed at some length the application of these surveys to farm problems, and the accuracy of the returns secured, the system used being that upon which our own surveys in the Province of Ontario are based. Up to the present time about thirty-five to forty sections in the United States have been covered, growth for the first few years, beginning 1907, having been slow; only about one survey per year having been made. The aim of the surveyors is to secure areas which are typical of much larger sections of the country, so far as soil topography and climatic conditions are concerned. A. Leitch, Director of Farm Surveys for Ontario, outlined the steps which had led to the organization of surveys in this Province and emphasized very strongly the necessity of having more records in each survey than were secured in the Caledon survey last fall. The township council had not been found a suitable medium for introducing the survey to members of the community, because it is more or less of a

controversial body. The Oxford County survey, which has just been completed, was made very successful by enlisting the support of the local organizations of the United Farmers of Ontario. Meetings were held previously and, all told, records from 447 out of 500 farms were secured; 340 records have been secured in Dundas County, and Mr. Leitch now feels that he need have no hesitation in approaching the farmers of any county for the survey work. A general glimpse of the information secured in Oxford County has convinced Mr. Leitch that even the present high prices are not as correspondingly high as the cost of production in many cases.

A very interesting report was heard from A. H. McLaren, Lecturer in Sociology at the College at Guelph, with respect to a social survey which was carried out in Caledon Township in conjunction with the farm survey by Mr. Leitch. It was brought out that out of 190 farmers, 155 were satisfied with farm life, and 114 wished their children to remain on the land. Only two homes would score over seventy-five per cent. for attractiveness of surroundings, and 150 were without running water, the water being carried an average distance of 90 feet in 152 homes. In all, 37,490 acres where farms averaged 140 acres each, were included in this survey. A fuller account of these findings will be published later.

Standard Feeds.

The question of standardization of feeds was discussed by C. F. Bailey, Assistant Deputy Minister of Agriculture, and Mr. Leitch, in connection with a discussion of the work carried on by the Organization of Resources Committee. Dr. G. C. Creelman, Commissioner of Agriculture, first discussed the work of this committee in a general way, reviewing the circumstances which led to the division of the original committee into three sections, dealing respectively with finance, labor and agriculture. Some of the work reviewed by Dr. Creelman were the loans to farmers for seed grain, the spring wheat and fall wheat seed campaign, the advertising campaign of the Department of Agriculture, and the flax campaign. The agricultural section is now working on a plan whereby it is hoped to secure, through the Ottawa authorities, two large seed elevators for the Province of Ontario, wherein supplies of cereal and grass seed may be stored for distribution through the regular channels, previous to planting time. It is felt that the importance of available seed is sufficient to warrant the establishment of these elevators to be used as a source of seed supply for the Province. Mr. Bailey, in discussing the standard feeds for hogs and dairy cattle, gave Mr. Leitch credit for the idea of overcoming the unsatisfactory condition experienced last winter, by the establishment of standard feeds of high quality, distributed through strict Governmental control. It was stated that the Food Administration and the War Trade Board in the United States had offered every facility possible for the securing of a sufficient supply of the ingredients of such standard feeds. Permission has been secured to import from the United States the following: Corn, 510,000 bushels; oil cake, 6,250 tons; cotton-seed meal, 6,000 tons; gluten feed, 4,500 tons; tankage, 500 tons, representing in all about \$1,000,000 worth of feed. Nothing definite can be announced with regard to the dairy feed as yet, and only last week was the final formula for the standard hog feed arrived at. Nine contracts have been secured from millers by which the Government is assured of 12,500 tons of this feed, which it is expected can be sold to the farmer, or farmers' organizations, at a price of \$57 per ton in carload lots, delivered to any station in Ontario, the feed to be in second-hand sacks. Mr. Leitch stated that the best plan would be for the farmers' organizations to supply their own sacks, because the price would be greater if the millers were forced to use new sacks. At this price, it was stated that one ton of the mixture would cost \$6.20 less than an equal feeding value in barley at present prices, and nearly \$13 less than an equal feeding value in wheat. This mixture plus one-quarter its weight in milk would make the best possible feed for weaning pigs, and the mixture plus one-third its weight in barley would make the best possible ration for finishing hogs. The dealer must pay the same price to the miller as the farmer, or organization of farmers. The mills who buy the ingredients, mix the feed and store and distribute them, are allowed \$5 per ton for so doing, by contract. There is no fixed price because the figure given above may vary slightly from time to time, according to Mr. Leitch. Similarly, the feed from different mills may vary slightly in composition and price. Generally speaking, however, the committee have laid down the rule that each mill must put out feed which contains at least 16 per cent. pure protein, at least 6 per cent. fat, and not more than 6 per cent. of crude fibre. This means that the feed will be of good quality and standards of this kind will enable the miller to utilize by-products from manufacturers in Canada, new types of which are being continually thrown on the market. It is expected that this feed will be on the market August 1.

The Labor Situation.

Much attention was given to the labor situation, speakers being present from the Trades and Labor Branch of the Ontario Department of Agriculture, in addition to a number of members of the Labor Section of the Organization of Resources Committee. The District Representatives are now in possession of copies of the registration cards signed by those persons living in urban districts who signified their willingness to work on farms, or to assist in farm work. This labor will not be conscripted for farm work, but an effort will be made to get as much of it to volunteer as there seems to be a demand for. Several of the Representatives detailed the methods they had found most effective in securing labor for the farms, and applications for help from those

farmers who were in need of it. It was suggested that a labor office of some kind might be established in each township, and one of the Representatives had carried on some investigations which showed that about 40 per cent. of the help received had been satisfactory. It was generally thought that a wage of \$2.50 per day was the proper one from the farmer's standpoint, but that this labor would be required in periods of a few days only to a greater extent than last year. While manufacturers do not seem so free to offer their help this year as they were in 1917, it was also thought that the demand for help was not so keen. Farmerettes were spoken of in highest terms, both in the fruit districts and general farming. An account was given by the Representative from Lambton County of the successful operation of threshing gangs in his county, details of management being given.

Many interesting addresses were given which it is impossible to discuss here for lack of space, and much of the time was, of course, taken up by discussions dealing with the method of work followed by men in representative counties with regard to different lines of work. Co-operation was discussed thoroughly during one whole forenoon, and the experience of several very successful organizations related. Messrs. F. C. Hart, and E. G. Gordon, of the Co-operation and Markets Branch, Toronto, respectively, discussed the legal aspect of co-operation and the co-operative marketing of live stock. The Junior Farmers' Improvement Associations throughout the Province are not flourishing; many of the boys have left the farm and the remainder are too few and scattered to carry on the work. Some alterations have been made with regard to the various competitions annually conducted through the Agricultural Representatives and some lines of work have been altogether dropped for the time being. A most interesting line of work was discussed by the Representative from Lennox and Addington, having to do with the organization of pig clubs among the boys and girls. This work was undertaken for the first time this year and was successful beyond all expectation, one of the banks co-operating very generously in the provision of prize money, and both parents and children falling in line most heartily with the idea.

Supreme Court Upholds Validity of Order-in-Council.

Four judges of the Supreme Court of Canada last week declared the Order-in-Council, cancelling exemptions from military service granted to men of 20, 21 and 22 years of age, to be valid and binding. Two members of the Court dissented from this view. The decision of the majority of the Court was written by Mr. Justice Anglin and concurred in by Sir Charles Fitzpatrick, Sir Louis Davis, and Mr. Justice Duff. Mr. Justice Idington and Mr. Justice Brodeur were the two dissenting members. The decision of the majority will, of course, prevail but it is reported that some solicitors, acting in behalf of clients, will not consider the decision as final, and will appeal to the Privy Council. However, in such a case, the Privy Council must first consent. The view is held that the judgment establishes a precedent covering the cases which have come up in Alberta, Quebec and elsewhere. Should an appeal to the Privy Council be accomplished, it would probably be November at least before a higher decision would be handed down.

The Manufacturers' Viewpoint.

Elsewhere in this issue appears an announcement entitled: "Mr. Farmer—We Believe You to be Fair." This is an advertisement paid for by the Canadian Manufacturers' Association, who desire in this way to give full publicity to the address delivered by S. R. Parsons, the retiring President of the Association, at the last annual convention at Montreal, on June 15. Farmers are beginning to take a keener interest than ever in matters concerning tariffs and labor, and these are the points emphasized in the announcement. It is necessary to have a full understanding of both sides of any question, and the readers of this address will profit, no doubt, by a full acquaintance with the manufacturers' viewpoint, as well-reasoned-out opinions are usually soundest and arrived at most logically. There is a period of readjustment coming, and farmers must be prepared to present their views. In this they have the advantage of knowing the viewpoint of those with whom they may hold differences of opinion.

Farmers May Provide For Seed

Stories have been in circulation regarding wheat which have caused farmers some concern in regard to the seed situation. To clear this matter up the "Resources Committee" are giving circulation to a letter received by Quance Bros., of Delhi, from the Food Board, to whom they wrote for information. The letter reads thus:

"Replying to your letter of June 18, there is no regulation either on the part of the Canada Food Board or the Board of Grain Supervisors to prevent or discourage anyone from retaining necessary adequate supplies of seed wheat. Special regulations of the Board of Grain Supervisors issued from their office, Grain Exchange, Winnipeg, Man., stipulates that anyone may sell wheat for any price which the purchaser is willing to pay for it for use for seed purposes."

Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending July 18.

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	Same Week	Week Ending	Same Week	Week Ending	Same Week	Week Ending
July 18	1917	July 11	July 18	1917	July 11	July 18	1917	July 11	July 18	1917	July 11	July 18
Toronto (Union Stock Yards)	3,886	5,429	4,380	\$14.25	\$11.25	\$14.60	967	959	1,379	\$16.75	\$35.00	\$17.00
Montreal (Pt. St. Charles)	700	708	801	13.00	11.00	14.00	1,817	882	3,216	15.50	12.50	15.50
Montreal (East End)	682	663	1,091	13.00	11.00	14.00	777	591	1,573	15.50	12.50	15.50
Winnipeg	4,500	2,424	2,794	15.00	9.00	15.00	309	189	243	15.00	12.00	15.50
Calgary	4,360	528	2,213	13.65	8.00	12.25						
Edmonton	1,371	329	972	12.00	7.75	11.50	204	12	42	12.00	12.00	13.00

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	Same Week	Week Ending	Same Week	Week Ending	Same Week	Week Ending
July 18	1917	July 11	July 18	1917	July 11	July 18	1917	July 11	July 18	1917	July 11	July 18
Toronto (Union Stock Yards)	5,755	8,684	5,953	\$18.60	\$16.25	\$18.50	1,800	2,170	1,550	\$23.00	\$14.50	\$23.75
Montreal (Pt. St. Charles)	1,277	1,122	1,835	19.25	16.50	19.25	775	515	635	21.00	14.00	21.00
Montreal (East End)	575	903	1,022	19.25	16.50	19.25	319	350	546	21.00	14.00	21.00
Winnipeg	6,971	5,479	6,714	17.75	15.15	18.00	908	155	346	18.50	11.00	18.75
Calgary	3,743	2,248	3,436	17.50	14.35	17.35	674	97	1,041			14.25
Edmonton	838	813	846	17.25	14.00	16.85	2		84			16.00

Market Comments.

Toronto (Union Stock Yards.)

Cattle receipts totalled slightly over forty-one hundred head during the week. Prices weakened a trifle in a very slow market on Monday, purchases being made at a decline of twenty-five cents per hundred from the previous close. Notwithstanding the inaction of the buyers during the early hours of Monday's trading, all but two hundred head were weighed up by the close of the market, although at the lower prices. There was little change in quotations during the balance of the week and, while one of the abattoirs received liberal shipments of distillery fed steers, and were consequently off the market on Thursday, the light offering on that day was sold at prices equal to those prevailing on the earlier markets of the week. A few heavy cattle were on sale and \$14 to \$14.50 per hundred was paid for the best of these. A number of steers weighing twelve hundred and fifty pounds sold as high as \$14.25, a few head of eleven hundred pounds sold at \$14.50, while twenty head of eleven hundred and sixty pounds, and twenty-four of ten hundred pounds sold at \$14 per hundred. Other sales were made at similar prices, while most of the cattle within these weights were weighed up at from \$13 to \$13.75 per hundred. Of the steers and heifers of lighter weights, a few head sold at \$13.50 per hundred, but the larger proportion of the best grades moved to the sales at \$12.50 to \$13.50; medium butchers from \$10.50 to \$11.50 and common eastern cattle from \$8 to \$10 per hundred. A few extra choice cows sold as high as \$11.75, most of the best quality stock sold from \$10 to \$10.75; that of medium quality from \$9 to \$9.75, and common from \$7.50 to \$8.50 per hundred. Bulls moved at similar prices as the cows. One or two choice bulls sold at \$12, while \$10.25 to \$11 was the range for the sales of the best killers. Medium bulls sold from \$9 to \$9.75, and common from \$8 to \$9. Stockers and feeders sold in sympathy with other grades of cattle. Trading in this department was a trifle inactive under only a limited demand from Ontario points. Calf prices are inclined to go lower, although liberal shipments to the Buffalo markets are having a steadying influence on the trade. A few extra choice calves sold at \$16.75, with the bulk of the best veal selling from \$15 to \$16.25; medium calves from \$13 to \$14 and common calves from \$9 to \$11.

Sheep and lambs sold at prices a trifle lower than those of the previous week. Spring lambs were off about \$1 per hundred, top sales being at \$22.50, while from \$20 to \$22 covered most of the transactions. Light sheep sold from \$13 to \$15 and bucks and heavy sheep from \$10.50 to \$12.50.

The hog market developed a stronger tone during the week, moving in with Chicago and Buffalo markets. Prices on Monday and Tuesday were steady at last week's quotations. On Wednesday quotations were advanced to \$18.50 and \$18.60 per hundred, while on Thursday sales were reported at \$18.75, while most of the selects sold from \$18.50 to \$18.60 on that day. Receipts continue light in volume.

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	130	\$14.24	\$13.50-\$14.50	\$14.50					
STEERS good	290	13.50	13.00-14.00	14.25	62	\$12.50	\$12.00-\$13.00	\$13.00	
STEERS 1,000-1,200 common	25	11.91	11.25-12.50	12.75					
STEERS good	473	13.01	12.50-13.50	13.75	112	11.50	10.50-13.00	13.00	
STEERS 700-1,000 common	167	10.63	10.25-11.75	11.75	41	9.75	8.50-10.00	10.50	
HEIFERS good	387	13.25	12.75-13.75	14.25	32	10.75	10.25-11.50	11.50	
HEIFERS fair	277	11.25	10.50-11.50	11.50	38	9.00	8.75-9.50	10.00	
HEIFERS common	34	9.21	8.50-10.00	10.00	46	8.00	7.50-8.50	8.50	
COWS good	656	10.39	10.00-11.25	11.50	38	9.50	9.25-10.50	10.50	
COWS common	594	8.85	8.00-9.50	9.75	136	8.00	7.50-9.00	9.00	
BULLS good	40	10.67	10.00-11.25	11.75	11	9.75	9.50-10.00	10.00	
BULLS common	84	9.05	8.50-10.00	10.50	124	8.35	8.00-9.00	9.00	
CANNERS & CUTTERS	97	6.50	6.00-7.00	7.00	16	6.25	5.50-7.00	7.00	
OXEN									
CALVES veal	967	14.35	13.00-15.50	16.75	1,728	9.00	8.50-14.50	15.50	
CALVES grass					26	7.50	7.00-8.00	8.00	
STOCKERS good	205	10.00	9.00-10.50	10.50					
STOCKERS fair	101	9.14	8.50-9.75	10.00					
FEEDERS good	234	11.16	10.75-11.50	11.75					
FEEDERS fair	92	10.60	10.25-11.00	11.00					
HOGS selects	5,248	18.43	18.25-18.60	18.60	992	19.25	19.25-	19.25	
HOGS (fed and watered) heavies	68	18.44	18.25-18.50	18.50					
HOGS lights	129	16.88	16.25-17.50	17.50	41	18.90	18.75-19.00	19.00	
HOGS sows	304	15.84	15.25-16.50	16.50	156	16.25	16.25-	16.25	
HOGS stags	6	14.33	14.25-14.50	14.50	12				
LAMBS good	1,235	21.84	20.00-23.00	23.00	471	21.00	21.00-	21.00	
LAMBS common	2								
SHEEP heavy	174	12.00	11.00-13.00	13.00					
SHEEP light	257	14.12	13.00-15.00	17.00	196	13.00	13.00-	13.00	
SHEEP common	132	8.42	7.00-10.00	10.00	108	12.00	12.00-	12.00	

Of the disposition from the Yards for the week ending July 11, Canadian packing houses bought 542 calves, 75 bulls, 165 heavy steers, 2,866 butcher cattle, 6,170 hogs and 1,323 sheep. Local butchers purchased 404 calves, 447 butcher cattle, 266 hogs and 403 sheep. Canadian shipments consisted of 47 calves, 92 milch cows, 302 stockers and 255 feeders. Shipments to United States' points consisted of 385 calves and 204 butcher cattle.

The total receipts from January 1 to July 11, inclusive, were: 134,354 cattle, 37,311 calves, 200,780 hogs and 19,254 sheep; compared to 121,907 cattle, 20,112 calves, 265,406 hogs and 17,636 sheep, received during the corresponding period of 1917.

Montreal.

Ten hundred and fifty head of the thirteen hundred and thirty-five offered during the week were sold on Monday, two hundred and twenty-five cattle on Tuesday and the remainder on Wednesday. The only stock on sale the following day was one car load of calves. There continues to be a variation of from thirty-five to forty per cent. in the receipts of cattle and hogs, one week compared with another. These wide variations in receipts and the consequent fluctuation

in prices adversely affect the general volume of business. Prices on cattle were slightly lower than those of the previous week, most noticeably for medium grade stock. Canners and cattle for boning were about even in price with the prices of the previous week. No cattle of good quality were on hand to establish values for cattle of that grading. Eleven head of very fair steers averaging ten hundred and seventy-five pounds, sold at \$13 per hundred; twenty-one steers weighing from ten hundred and twenty-five to eleven hundred and seventy-five pounds, and averaging eleven hundred and ten pounds, sold at \$12.50. Sixteen head of mixed steers and heifers realized \$11, while other grades of steers sold down to \$7.35. These were young very light steers and heifers for boning. The butcher cows easiest of sale, were those of good weight and quality. A number of cows were purchased for shipment to Quebec City for the butcher trade, at prices ranging from \$9.50 to \$10.50 for those of dairy breeding and fairly fat. A large number of bulls in fairly good flesh, not fat, weighing from ten hundred to thirteen hundred pounds, sold from \$8 to \$9 per hundred. The market for good calves was very firm, \$15.50 per hundred being paid for the best calves on sale. The quality is gradually falling off and some

calves sold during the week as low as \$7.50.

Lambs sold at a flat rate of \$21 per hundred, while most of the sheep offered were weighed up at \$13 per hundred. The market closed firm on Thursday.

Practically all the select hogs offered sold at \$19.50 per hundred, off car weights. About ten per cent. of the week's run was made up sows, for which \$3 per hundred less was paid than the price of selects. While a little too light in weight for export bacon purposes, pigs five to six months old are coming on the market.

PT. ST. CHARLES.—Of the disposition from the Yards for the week ending July 11, Canadian packing houses and local butchers purchased 2,706 calves, 36 cannors and cutters, 113 bulls, 611 butcher cattle, 1,835 hogs and 635 lambs. Canadian shipments consisted of 16 milch cows and 25 butcher cattle. Shipments to United States' points consisted of 510 calves.

The total receipts from January 1 to July 11, inclusive, were: 17,982 cattle, 4,443 calves, 33,553 hogs and 8,471 sheep; compared to 19,460 cattle, 40,020 calves 48,864 hogs and 6,973 sheep, received during the corresponding period of 1917.

EAST END.—Of the disposition from the Yards for the week ending July 11, Canadian packing houses and local

Markets

of Agriculture, Live Intelligence Division

Good Calves

Same Week	Week Ending
1917	July 11
\$35.00	\$17.00
12.50	15.50
12.50	15.50
12.00	15.50
12.00	13.00

Good Lambs

Same Week	Week Ending
1917	July 11
\$14.50	\$23.75
14.00	21.00
14.00	21.00
11.00	18.75
	14.25
	16.00

Change Top

13.00	\$13.00
13.00	13.00
10.00	10.50
11.50	11.50
9.50	10.00
8.50	8.50
10.50	10.50
9.00	9.00
10.00	10.00
9.00	9.00
7.00	7.00
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Every farmer who desires to do business with

The Molsons Bank

is always assured of a courteous reception by local managers. And their object is to assist the farmer in a legitimate way, to make his land and stock more productive.

butchers purchased 1,340 calves, 1,003 butcher cattle, 1,022 hogs and 413 lambs. Canadian shipments consisted of 30 calves, 93 butcher cattle and 133 lambs. Shipments to the United States' points consisted of 203 calves.

The total receipts from January 1 to July 11, inclusive, were: 16,792 cattle, 23,381 calves, 21,196 hogs and 8,222 sheep; compared to 20,801 cattle, 32,024 calves, 25,696 hogs and 8,667 sheep, received during the corresponding period of 1917.

Buffalo.

Cattle.—Receipts of cattle were liberal at Buffalo last week, and Canadians filled a pretty good proportion of the week's run. Shipping steers, of which there were around better than forty loads, sold generally, these being comprised mainly of Canadians, best of which ranged from \$16.50 to \$16.60, and were generally of better quality and finish than of late weeks. Among natives there were only a few scattering loads of shipping steers, best of which ran generally from \$16.75 to \$17.50. Butchering stuff generally, which was made up mainly of a medium, fair and common kind of grassers sold from 15 to 25 cents lower than for the preceding week, though some strictly dry-fed kinds looked about steady. Bulls sold at about steady prices, stockers and feeders were slow sale at barely steady prices, while an unchanged trade was had on milk cows and springers. Offerings for the week totaled 5,900 head, as against 3,900 for the preceding week, and as compared with 4,750 head for the corresponding week a year ago. Quotations:

Shipping Steers, Natives.—Choice to prime, \$17 to \$17.40; fair to good, \$16.50 to \$16.75; plain and medium, \$13.50 to \$15; coarse and common, \$11.50 to \$12.50. Shipping Steers, Canadians.—Best, \$16 to \$16.60; fair to good, \$15 to \$15.30; common and plain, \$12.50 to \$13.25.

Butchering Steers.—Choice heavy, \$16.75 to \$17.50; fair to good, \$15.25 to \$16.50; best handy, \$15 to \$15.50; fair to good, \$14 to \$14.50; light and common, \$9.50 to \$10.50; yearlings, choice to prime, \$16 to \$17; fair to good, \$13 to \$15.

Cows and Heifers.—Best heavy heifers, \$13 to \$13.25; fair to good, \$12 to \$12.50; good butchering heifers, \$11 to \$11.75; fair butchering heifers, \$9 to \$10; common, \$8 to \$8.50; very fancy fat cows, \$11 to \$12; best heavy fat cows, \$9.50 to \$10.50; good butchering cows, \$9 to \$9.25; medium to fair, \$8.50 to \$8.75; cutters, \$7.25 to \$7.50; canners, \$6.75 to \$7.25.

Bulls.—Best heavy, \$11.50 to \$12; good butchering, \$10.50 to \$11. Stockers and Feeders.—Best feeders, \$10 to \$10.50; common to fair, \$9 to \$9.75; best stockers, \$9.50 to \$10; fair to good, \$8.75 to \$9.25; common, \$7.50 to \$8.

Milchers and Springers.—Good to best, small lots, \$100 to \$140; in carloads, \$80 to \$100. Hogs.—Continued light receipts was the medium for stronger prices again last week. Monday heavy hogs sold from \$18.25 to \$18.50; mixed grades landed mostly at \$18.60 and \$18.65; Yorkers brought from \$18.65 to \$18.75, and pigs and lights were on top, selling up to \$19. Tuesday the better weight grades showed a 10 to 15 cent advance, with pigs selling steady; Wednesday heavies brought up to \$18.75, with other grades selling from \$18.90 to \$19; and Thursday heavies moved at \$18.75, and others sold generally at \$19, with one deck \$19.10. Friday

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WRITE OR CALL AT NEAREST BRANCH.

Yorkers and light grades brought up to \$19.15, and packers' kinds moved at \$19 and \$19.10, low figure taking some heavies that were the same kind that sold Monday from \$18.25 to \$18.50. Roughts, \$16 to \$16.50, few fancy as high as \$17, and stags \$12.50 down. For the past week receipts were 14,300 head, as compared with 12,127 head for the week before, and 18,300 head for the same week a year ago.

Sheep and Lambs.—Last week's receipts were light, grand total being only 2,000 head. Offerings were against 1,647 head for the week before, and 1,525 head for the same week a year ago. On the opening day of the week best spring lambs sold from \$19 to \$19.50, and the following day prices were fifty cents lower. Wednesday's top was \$18.25, and Thursday's trade was quoted steady. Friday the best were ranged up to \$18.50, although but few were good enough to sell above \$18. Top yearlings sold Monday up to \$16.50, and the next four days the range on these was from \$16 down. Sheep were steady all week. Wethers brought up to \$14, and ewes went from \$13 down.

Calves.—Supply was liberal last week, there being approximately 4,000 head. Receipts were against 3,875 head for the week previous, and 2,775 head for the corresponding week a year ago. Monday top veals sold generally at \$18.50, and culls went from \$17 down. While the range in prices for the next three days remained the same as Monday, trade was slow. Friday values were a quarter lower, best going at \$18 and \$18.25, with culls \$16.50 down. Fed calves that were heavy went as low as \$7.50.

Toronto Produce.

Live-stock receipts at the Union Stock Yards, West Toronto, on Monday, July 22, consisted of 157 cars, 3,179 cattle, 433 calves, 833 hogs, 637 sheep and lambs. Good to choice cattle were steady; common cattle 25 cents lower. Top price \$15.75 for 43 steers, average weight 1,270 pounds. Good cows and bulls, steady; others 25 cents lower. Calves 50 cents lower. Sheep steady; best lambs, \$20 to \$21 per hundred. Hogs, \$18.60, 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 2 1/2% tax)—No. 1 northern, \$2.23 1/2; No. 2 northern, \$2.20 1/2; No. 3 northern, \$2.17 1/2; No. 4 wheat, \$2.10 1/2.

Oats.—Manitoba (in store, Fort William) No. 2 C. W., 92 1/2%; No. 3 C. W., 89c.; extra No. 1 feed, 89c.; No. 1 feed, 86c.

Oats.—Ontario, No. 2 white, 86c. to 87c. nominal; No. 3 white, 85c. to 86c., nominal, (according to freights outside).

Rye (according to freights outside)—No. 2, \$1.90, nominal.

American corn (track, Toronto)—No. 3 yellow, kiln dried, nominal; No. 4 yellow, kiln dried, nominal.

Peas (according to freights outside)—No. 2, nominal.

Barley (according to freights outside)—malting, \$1.35 to \$1.37.

Buckwheat (according to freights outside)—\$1.80.

Flour.—Ontario (prompt shipment). War quality, \$10.65, Montreal; \$10.65, Toronto. Manitoba flour, (Toronto, new bags) war quality, \$10.95.

Hay and Millfeed.

Hay.—No. 1, per ton, car lots, \$13 to \$14; mixed, \$11 to \$12. Staw.—Car lots, per ton, \$8 to \$8.50. Bran.—Per ton, \$35; shorts, per ton, \$40.

Hides and Wool.

Prices delivered, Toronto: City Hides.—City butcher hides, green, flat, 13 1/2%; calf skins, green, flat, 30c.; veal kip, 22c.; horse hides, city take off, \$6 to \$7; sheep, \$3.50 to \$5.50.

Country Markets.—Beef hides, flat, cured, 15c. to 17c.; green, 12c. to 13c.; deacon or bob calf, \$2.25 to \$2.75; 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, 16c. to 17c.; country solid, in barrels, No. 1, 15c. to 16c.; cakes, No. 1, 18c. to 19c.

Wool.—Unwashed fleece wool, as to quality, fine, 60c. to 65c.; washed wool, fine, 80c. to 90c.

Country Produce.

Butter.—The butter market kept practically stationary in price, selling as follows on the wholesales: Creamery, fresh-made pound squares, 46c. to 47c. per lb.; creamery solids, 45c. to 46c. per lb.; dairy, 40c. to 42c. per lb.

Oleomargarine, 32c. to 33c. per lb.

Eggs.—New laid also sold at unchanged prices during the week selling as follows, wholesale: New laid No. 1, 48c. to 49c. per doz.; selects, 51c. per dozen.

Cheese.—New, 25c. per lb.; new twins, 25 1/2% per lb.

Poultry.—Spring chicken receipts increased materially and prices weakened considerably. Fowl was also shipped in heavily, and as the demand was weak, prices declined. Spring chickens, 40c. per lb.; roosters, 18c. per lb.; fowl, 3 1/2 lbs. and under, 21c. per lb.; fowl 3 1/2 lbs. to 5 lbs., 24c. per lb.; fowl, 5 lbs. and over, 26c. per lb.; ducklings, 30c. per lb.; turkeys, young, 30c. per lb.; turkeys, old, 25c. per lb. These quotations are for live weight, now being paid to the producer.

Wholesale Fruits and Vegetables.

Blueberries.—Blueberry shipments have been quite heavy during the week, but the quality of a large portion has not been so good therefore prices had a wide range namely \$1.50 to \$2.50 per 11-qt. basket.

Cherries.—Cherries continued to command exceedingly high prices. Sweet blacks selling at \$1.75 to \$2 per 6-qt. basket, and sour at 75c. to \$1 per 6-qt. and \$1.50 to \$1.85 per 11-qt. basket. Some extra choice reaching the \$2 mark.

Currants.—Black currants also sold well at \$2.10 to \$2.75 per 11-qt. basket, and \$1.25 to \$1.50 per six quarts. The reds bringing from 10c. to 16c. per box; 50c. to 90c. per 6-qt. basket, and \$1.25 to \$1.75 per 11-qt. basket.

Gooseberries.—Like the rest of the fruits gooseberries are selling at advanced prices this year, 75c. to \$1 per 6-qt. basket, and \$1.50 to \$2 per 11-qt. basket.

Raspberries.—Receipts have gradually become heavier and prices slightly easier, ranging from 25c. to 32c. per box.

Strawberries.—Strawberries have not been of extra quality the past week, selling at 18c. to 25c. per box.

Tomatoes.—Outside grown tomatoes were shipped in much more heavily and sold at \$2 to \$2.50 per 11-qt. basket

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for No. 1's and \$1.50 to \$1.75 for No. 2's, the hot-house bringing from \$2.75 to \$3.50 per 11-qt. basket.

Beans.—Wax bean shipments were heavy the price ranging from 75c. to \$1 per 11-qt. basket.

Beets.—Beets came in freely selling at 20c. to 30c. per dozen bunches.

Cabbage.—The hot weather absolutely killed all demand for cabbage and it was almost unsalable even at \$2.50 to \$3 per crate.

Carrots.—Shipments were heavy the price keeping stationary at 20c. per dozen bunches.

Cauliflowers.—The quality has greatly improved, some extra choice selling at \$3 per dozen—ranging from that down to \$2.50 per dozen.

Celery.—There has only been a very small quantity of home-grown variety received—the bulk coming from Kalamazoo sold at 45c. to 50c. per dozen. Home grown at \$1.25 per dozen.

Cucumbers.—Outside grown cucumbers came in and sold at \$2 to \$2.50 per 11-qt. basket, the hot-house selling at \$2.50 to \$3 per 11-qt. basket.

Onions.—Choice California onions brought \$5 per cwt., a few home-grown received bringing 65c. per 11-qt. basket.

Peas.—Shipments dropped off—the quality being rather poor of the bulk received, selling at 75c. to \$1 per 11-qt. basket.

Potatoes.—Domestic potatoes have been of much better quality, selling at 75c. to 85c. per 11-qt. basket. Imported bringing \$7.50, \$5.50 and \$4.50 per bbl.

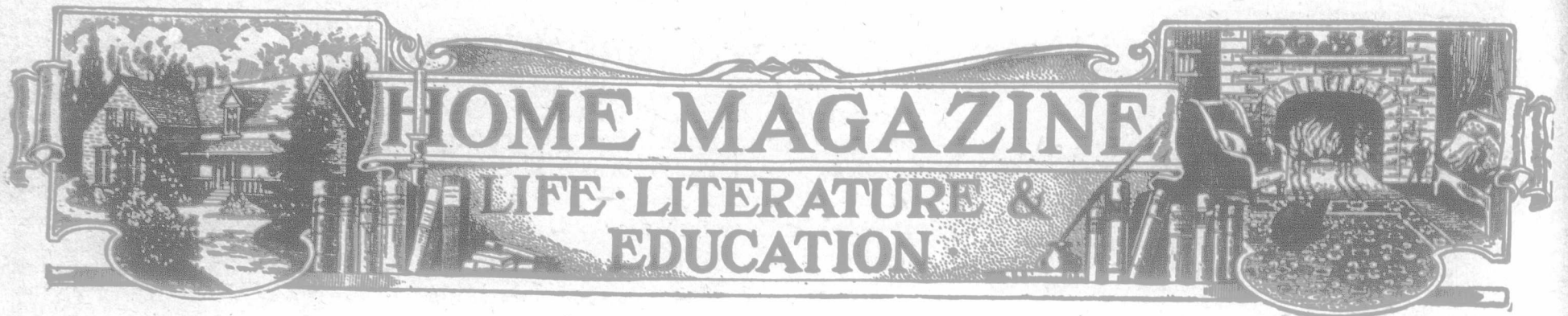
Chicago.

Hogs.—Butcher hogs, \$18.30 to \$18.75; light, \$18.45 to \$18.85; packing, \$17.40 to \$18.20; rough, \$17 to \$17.30; pigs, good and choice, \$17 to \$17.50.

Cattle.—Compared with a week ago, good to best mostly 25c. higher. Common and medium grass steers and butchers' cattle anywhere from 25c. to \$1 lower. Veal cattle 25c. to 50c. higher.

Sheep.—Compared with a week ago, top lambs 25c. to 35c. lower. Feeding lambs strong to higher. Sheep and heavy yearlings strong.

Continued on page 1254.



A-Singing.

(BY VICTOR STARBUCK.)

The wind is ever blowing through the sky,
And singing to itself a strange, wild song,
drifting by,
Upon its singing wings the whole day long.

The lake is ever lapping in her reeds,
And murmuring, while the drowsy moments pass.
A dreamy slumber-song that no one heeds,
As soft as sleep, and deathless as the grass.

My life is always beating at its bars;
And singing as it beats, with every breath,
The glory of the sunset, clouds and stars,
The tempest and the rose from birth to death.

May there be life and music while the earth
Rolls on—hearts, winds and waves and whispering streams
Chant the eternal tune of death and birth,
Of thoughts and clouds, of shadows, hopes and dreams.

May there be life and music—may I be,
O God, of murmuring wind and wave-lapped strand,
Endowed with ears to hear the melody,
With heart to feel, and soul to understand.—Sel.

Out of German Captivity.

BY WILLIAM T. FOSTER, IN THE INDEPENDENT.

SAD is the story of the war, as it is written in every village of France—in long rows of ambulances and far-flung fields of rough wooden crosses; in once lovely villages, now ravaged beyond recognition; in schools, casinos, hotels, cellars, villas—all turned into hospitals—easy targets for enemy bombs; in maimed, shell-shocked, discarded men; in poilus, twice-wounded, plodding their way back to battle; in women of harvest fields and factories, bent with the added weight of men's labor; in faces which tell of husbands, fathers, brothers, dead; in children for whom fright has blanched the will to laugh and play; but nowhere has the tragedy so terse a summing-up or so dramatic a setting as at Evian-les-Bains.

I came upon that vision of inviolate peace and beauty, on the southern shore of Lake Geneva, in the glory of an early morning, my mind worn with the ugliness and the turmoil of battlefields. Over the vivid blues, purples and greens of Lake Geneva, changing in the sunlight, pointed sails were darting, white gulls above them. Between two tall, dark sequoias on the shore, I caught the white flash and the red circle of a French aeroplane. Across the lake, the gay roofs of Lausanne seemed to be climbing the hills in an effort to reach the summits of the Bernese Alps beyond. Such is the setting provided by the fortunes of war for a tragedy of Prussian origin.

The theme of the tragedy is that every war, whatever else it may be, is a war against women and children. The pitiful proof of this indictment is straggling into Evian every day from the devastated regions of Belgium and northern France. Every French man, woman and child behind the lines that Germany cannot use in prosecuting the war, or otherwise dispose of, is put on the lists for deportation into France—*rapatriés* they are called. Twice a day, 500 are cut off the lists; packed into a train, and delivered to the benevolent

care of Switzerland at Schaffhausen—500 exactly, with typical German system, let the line come where it will, separating mothers and daughters, if need be. If the daughters are capable of any kind of labor, they have already been separated from their mothers, and sent away to other parts, known only to military authorities, for purposes known only to military authorities.

On my first morning in Evian, one of the *rapatriés* greeted me with a smile of contentment that made her a marked woman in that company. She begged the honor of informing me that she was the Countess of Liege, that she was to be married on November 30, that she would send an automobile to take me to the wedding, and wished me to bring a purse of morocco leather. She is not the only woman who has become insane, on seeing her daughter dragged away by German soldiers.

With each train comes a list, made in Germany, of the names of the detachment. Here and there, a woman's name is crossed out of the list, with the explanation, "bleibt zuruck, ist noch arbeit fahig." Thus, her people in France have the comfort of learning that in the judgment of German authorities, she is still capable of doing some work, and therefore retained behind the lines as a "military necessity". As a rule, only the aged, the infirm, the consumptives, the syphilitics, the maimed the feeble-minded and the young children are released. Germany has devised this way of getting them off her hands, at the same time making them an additional drain on the meager food supply of France and on the sadly-depleted corps of doctors, and thus spreading disease. Sick in France, these people are a greater military advantage to the Kaiser than they would be if dead in Germany. So they have been

but it is serving 500 new guests at each meal on a "no pay, no tip" plan. In the orchestra balcony, children under seven are checked while their mothers are busy; and the mothers must not lose their checks lest they fail to recognize their children after they have been scrubbed and combed and dressed anew and despoiled of vermin by the expert and thorough corps of Red Cross nurses.

The theater of the Casino has become the Vestiare. At the box office each person receives a ticket entitling him to as many articles of clothing as the authorities think he needs. Where once the footlights shone, is a collection of hats; in one of the opera boxes are petticoats, in another pajamas, in another blankets. The shoe department is behind the scenes. It contained, at the time of my visit, a consignment of high-heeled shoes from an American donor.

The Dance Hall has become a clearing house for the bringing-together of separated families. Here is filled all available information concerning the people who lived in the occupied parts of France. Letters await those who may possibly be selected by Germany for deportation. Beside merry paintings of sprightly dancers, many of the *rapatriés* receive the first news from their families, since the invasion of their homes in the summer of 1914. One evening, I saw a mother with her three children who had just received a letter telling of her husband's death two years before, and another mother who had just heard that her son, whom she had given up as dead, was alive and well. These are daily happenings at Evian.

On the wall is a placard calling for information concerning "Charles or Carlito Bonlant, Pilot Aviateur, Class 1909, who fell in an air-fight after having brought down a German craft, east

could receive attention. As I entered the Casino, an old man fell on the stairs from sheer exhaustion and cut a gash in his head. It took one of the doctors half an hour to care for this one arrival. Meantime, fully one hundred more had entered the Casino. The physicians had no time to examine even all those supposed to have tuberculosis or venereal diseases. A majority of the *rapatriés* appeared to need immediate medical care. They had been without such care for three years, under conditions of malnutrition and mental anguish. The physicians and nurses at Evian excited my admiration; they were working with skill and devotion and good cheer—but at a task they could not compass.

Large barracks are used as a hospital under the care of devoted sisters; but the buildings are not adapted for the needs, the equipment was meager, and the French Government could not answer the calls for more physicians. Help at Evian seemed one of the most obvious and immediate needs of Europe. It is a service the American Red Cross is well qualified to render, and is now undertaking.

The buildings of the College at Evian are now a home for men and women from seventy to one hundred years of age. As I entered the dining hall, they sat at uninviting rows of tables—these mothers and fathers who endured the Prussian war in middle life—before their allotment of coarse war-bread, and no sign of cheer except a placard on the barren wall—"Rapatriés! Economize the bread. Any one who wastes the least morsel is a bad Frenchman." I did not wonder that Germany had found no use for these homeless, childless, feeble relics of the war.

The tragedy was not without its humorous scenes. One little lady stepped off the train at Evian with all she had saved from the wreck of her home—enough camouflage to hide the honest war-wrinkles of her face, and a little red bird in a cage to match. A Darby and Joan, resting by the roadside on their way to the Casino, exhibited all their worldly possessions—the miscellaneous assortment of clothes they wore, picked up at railroad stations on their way through Switzerland, their white identity tags and a large bundle of canes and umbrellas. A black-gowned mother from St. Quentin appeared with a white table-cloth tied over her head. She had been driven from her home to Malignes, later to Namur, recently, across the border to German territory and for the past three days and nights she had sat bolt upright among her 499 fellow travelers. In all her wanderings she had not lost sight of her favorite white table-cloth. Another woman appeared at the Casino with two shabby children and a French poodle.

On the steps of the Casino sat an old man, leaning on his cane, and reading over and over again a letter he had just found at the registration bureau telling of his son's death. At the foot of the staircase stood a man in search of his grandmother, eagerly watching the new arrivals. Twice a day he came, hoping against hope. Nearby was a woman with her four children, all crying, and in her arms the unruffled cause of their troubles—a year-old babe. The people to whom they had been sent for the night's lodging had spurned the child as "Boche". An old man with bushy white whiskers and a sailor hat, tucked all his belongings under his arm and started off to join the old people in the College. One of the women declared by the German Government "unfit for work", and sent back to France to begin life over, was born during the Napoleonic wars.

The daily arrivals at Evian from behind the German lines are the latest



In Canada—Not Ireland.

Pulling flax. This scene has been duplicated in many parts of Canada this year. After all, America may not have to do entirely without linen.—Photo by Boyd.

shipped to Evian-les-Bains, every morning, every evening, for more than a year, bearing in their arms some remnants of what they once owned, and in their faces some traces of what they once were.

At Schaffhausen, the *rapatriés* are turned over to the Swiss. During their journey to Lausanne and around the eastern end of Lake Geneva, they are kindly received and bountifully fed by the Swiss people. Indeed, many of these travelers break down and weep for joy at unaccustomed kindness, and some of them break down from the sudden shock of having enough to eat.

At Evian-les-Bains each new contingent is taken at once to the municipal Casino, a great domed pleasure-palace by the lake transformed for the duration of the war. The dining hall is still a dining hall,

of Baupaume" and many other attempts to trace "lost men". Not even the International Red Cross at Geneva has been able to send any welcome news of "lost men" to the French people behind the German lines; for Germany, alone among the nations of the world, forbids the mailing of good news to any of her captives, civil or military. Bad news may be sent, provided it is sent without a single word of sympathy.

The Bar of the Casino has become the Medical Examiner's quarters. Here I found three physicians, one of them ill, making valiant efforts to care not only for the previous arrivals who were still in Evian at eight hospitals and homes, but at the same time for one thousand new arrivals daily. Only the most obvious and urgent cases

sources of dependable information concerning certain aspects of life in the enemy country. German prisoners, to be sure, are always available; but it is difficult to tell whether their stories are true, or designed to please their captors, or to aid their fatherland. The *rapatriés* seem to have no motive other than to tell the truth. Furthermore, they arrive daily from various parts of Germany, France and Belgium.

Some of the women from Lens told us that they had been urged, again and again, by German military authorities to renounce their allegiance to France and go with their children to settle in a German town designated for that purpose. They were told that all France was devastated, that the people were starving, that the French Republic was at an end, that London was utterly destroyed, and that the United States of America had no intention of sending troops. A few days later they were shown pictures of ruined cities—cities which the German Army has not reached. During all this time the only reports the German Government allowed them to receive from the International Red Cross told of the deaths of their husbands and sons. Throughout their three years of captivity, these women were left to infer that all their relatives were dead. "If they are still alive," said their persecutors, "why have they not written to you?"

At the Casino, after dinner on the day of my arrival, the Sous-Prefect made an address of welcome in which he assured the people that their villages would be restored and their houses rebuilt. He told them of recent military victories of the Allies. As a final word of encouragement, he spoke of what he called the greatest event of the war, the coming of the United States to their aid. The applause was spontaneous and prolonged. I was the only American there and the speaker was then unaware of my presence. I took his words and the demonstration which followed as the genuine expression of the feelings of the French people. One of the *rapatriés* spoke in response.

Then I looked upon the most touching of all the scenes I found in all Europe. In the balcony, among the children, a woman began to sing. There was a respectful lull. A moment later, a sudden thrill seemed to transfix every person in the hall. "The Marseillaise"! Under the iron heel of the Germany Army, they had not heard that song since the terror of 1914 descended upon them. Now, the first strains caught them unprepared, and brought to bear upon them, of a sudden, the terror and the heartache of those three years and the new, exquisite joy of their first moments in La Belle France. For, up to that moment, most of them had gone through the various movements of the Evian Administrative program, as though walking in a dream. Weak with years of hunger, wearied with broken hopes, dazed with German lies, habituated to docile obedience, they were not easily awakened. "The Marseillaise" was the magic touch. With its first notes came a silence that was almost too much to bear—

a silence surcharged with pent-up emotion.

Then a man above ninety years of age arose at his place, and joined in the song with a voice so weak that it seemed as if every breath would be his last. Other *rapatriés* tried to sing, but their voices wavered and the tears came. Nowhere in the hall could I see eyes that were quite clear. For my own part, I do not pretend to be a reliable witness of anything after the first notes of "The Marseillaise".

What the Allies Fight For.

In his address at Washington on Independence Day, President Wilson restated as follows his conception of the ends for which the Entente Allies are fighting:

1. The destruction of every arbitrary power anywhere that can separately, secretly, and of its single choice disturb the peace of the world; or, if it cannot presently be destroyed, at the least its reduction to virtual impotence.

2. The settlement of every question, whether of territory, of sovereignty, of economic arrangement, or of political relationship, upon the basis of free acceptance of that settlement by the people immediately concerned, and not upon the basis of the material interest or advantage of any other nation or people which may desire a different settlement for the sake of its own exterior influence or mastery.

3. The consent of all nations to be governed in their conduct toward each other by the same principles of honor and of respect for the common laws of civilized society that govern the individual citizens of all modern states in their relations with one another; to the end that all promises and covenants may be sacredly observed, no private plots or conspiracies hatched, no selfish injuries wrought with impunity, and a mutual trust established upon the handsome foundation of a mutual respect for right.

4. The establishment of an organization of peace which shall make it certain that the combined power of free nations will check every invasion of right and serve to make peace and justice the more secure by affording a definite tribunal of opinion to which all must submit and by which every international readjustment that cannot be amicably agreed upon by the peoples directly concerned shall be sanctioned.

A Summer Cycle.

A boat and a beach and a summer resort,
A man and a maid and a moon;
Soft and sweet nothings and then at the real

Psychological moment a spoon.
A whisper, a promise, and summer is o'er,
And they part in hysteric despair
(But neither returns in the following June,
For fear that the other is there).

—Lippincott's Magazine.

Hope's Quiet Hour.

The Vision of the The Invisible.

He endured, as seeing Him Who is invisible.—Heb. 11 : 27.

Beneath man's weakness lies the strength of God,

If by His grace the perilous paths are trod.
Lift up thine head and thou wilt see
Celestial light accompanying thee.

So will be shown thee in the darkest gorge,
The flame where thou wilt hammer in this forge,

Deeds linked with needs, until the chain
be wrought

To such design as thou hast never thought.
J. WILLIAMS.

"He endured, as seeing Him Who is invisible." The writer was thinking of Moses, who—many thousands of years ago—was fearless in danger because, by faith, he saw the invisible King. Only God can number the men and women who have gained strength to endure through their vision of the invisible. I believe we are all mystics at heart, though we may fiercely deny any interest in mysteries outside the range of everyday business.

Yesterday a woman told me how she still had regular "family" prayer, though living entirely alone. For years she had knelt beside the bed of her helpless mother and she still kneels there and has "family" prayer. She tried to carry on the old practice in her own room, but could not feel satisfied. Beside her mother's bed she felt her mother's invisible presence. She seems like a practical commonsense woman—but the things she can see are of little consequence in her life as compared with the vision of the invisible.

I have just been reading "The Church in the Furnace"—a volume of essays written by seventeen army chaplains. Each essay is entirely independent of the others. Each writer gives his own point of view only. And yet they all tell practically the same thing. Through the eyes of each chaplain we see the average soldier—though one of them declares there is no "average" soldier—chafing against his idea of "religious" unreality, yet hungrily reaching out after God. It is not easy to win the confidence of the ordinary soldier and get him to talk to a "padre" about his real thoughts. His language may be rough and and sound shockingly irreverent to the startled "parson", and yet God understands his blind but eager groping after invisible realities. The "padre" must often stand aside and leave "Tommy" alone with God; but, after all, is not that secret comradeship of the soldier with his invisible King of infinitely more value than any instruction another man can give?

Words may be very unlike our idea of what prayer should be, and yet they may be real utterances of a prayerful spirit. Does God care for beautiful, highly-polished prayers if they come only from the lips? Is it the words of prayer that matter most, or is it the prayerful spirit?

A soldier is like the rest of us in this—he is impatient of unreality and contemptuous of "cant". If religion is only a profession he has no use for it, but he respects a man who really believes in God. He scorns long-winded prayers which are only "words", but a leader who can make him feel the invisible Presence of God is sure of attention. One chaplain writes:

"Would that the home clergy could see us struggling to achieve for ourselves and the groups of willing but unpractised men the sense of God's Presence in our midst. Every detail of environment fights against us. Past stoic endurance of unintelligible collects has led the men's minds to expect no reality or meaning in the 'prayer' part of the service. Dirt and damp make it impossible to kneel. Even belief in prayer has perished. And the padre stands in the midst resolved that the Presence shall be known, and the prayers mean and help much."

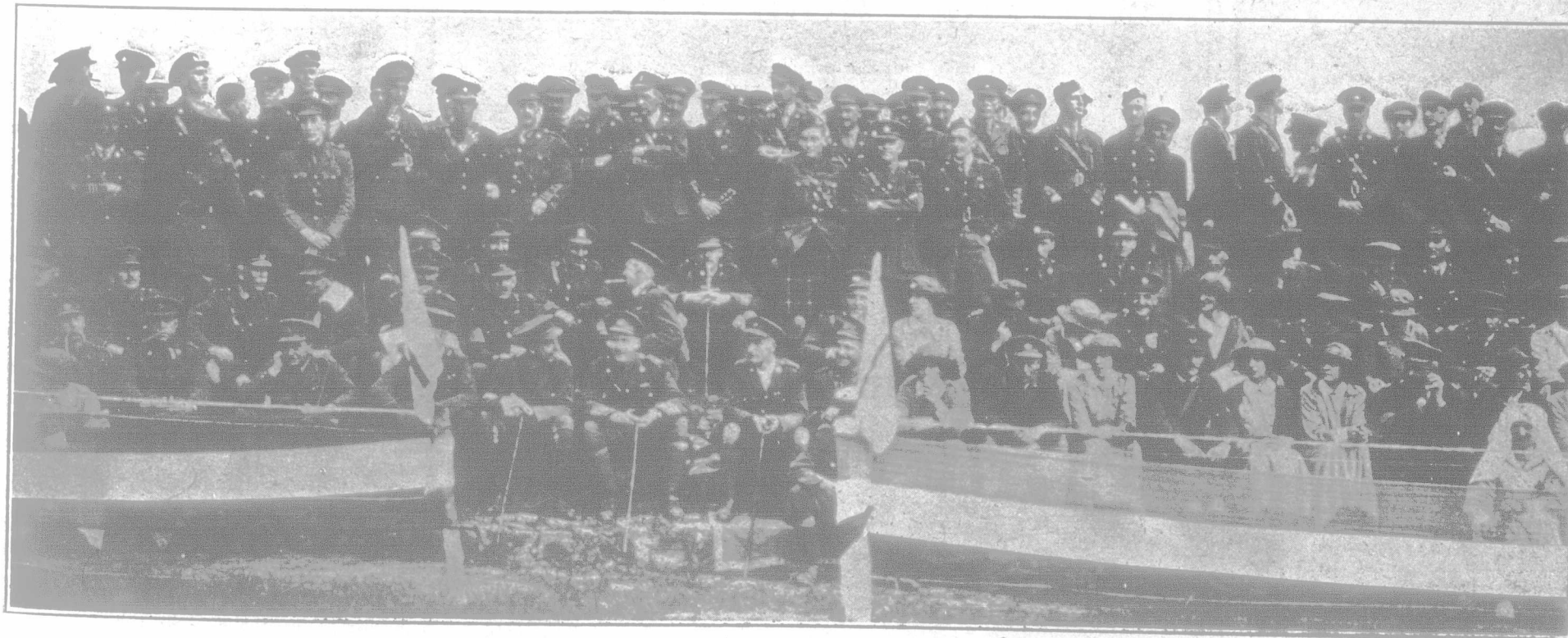
Just think what it means to those men if they go out from the service feeling that they have been face to face with God. The words of prayer they have heard may fade swiftly from their minds, but that impression endures. Christ is their invisible Comrade, and when they go out through the fire He is with them. They are "not religious", but they are as anxious as the Greeks of old to "see Jesus".

One chaplain speaks of holding Communion services in the orchards of little French villages, or behind the lines "with an ammunition box for altar and a shell hole for the Sanctuary, amidst the thunder of guns which ever and again drowned the familiar words, and when the time for communion came we passed with the Bread of Life from man to man as they knelt in disorder where they could find kneeling space on the shell-torn ground."

He declares that in the peaceful orchard or on the field of battle they "all felt a reality in the service, a nearness to God, a true feeding upon Christ. . . the sense of reality was due to the absolute simplicity of it all; all accretions and externals were stripped away, we were just a band of brothers breaking bread together with gladness and singleness of heart."

How the heart of the Living Christ must rejoice as He moves invisibly in the midst of those soul-hungry, weary and heavy-laden men, and gives Himself to be their Strength in danger, their Peace in the awful din of battle, and their Friend at all times.

A chaplain at one of the dressing stations resolved to offer to pray with every man of his brigade who passed through. One young officer, who had seemed—in the past—very irreligious, was brought in. The chaplain had little hope of reaching him, but he offered to



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pray and the answer came as a surprise:
"Yes, please, padre, it's just what I've
been wanting."

How many there are, both at the front
and at home, who want to realize the
Presence of God! Man has been defined
as "a religious animal"; and one who
can lead a comrade into the Presence
of the King is able to do him a great
and valued service.

"Why don't people go to church?"
is a question that is often asked; and the
church on one side of the street tries its
hardest to have more attractive services
than the church on the other side, in
order to win larger congregations. It
is little wonder that bewildered lookers-
on, who say they are not religious (and
who really believe what they say) imagine
that the object of "religious" people
is to fill the churches with crowded con-
gregations. Get a popular preacher,
and advertise him well, and you can fill
a building with curious people who are
eager to hear something new. But the
business of the Church is to bring the
world to the feet of Christ, and the
world is made up of individuals. Study
the Gospels and you will notice how our
Lord offered His uplifting fellowship
to ordinary men and women—if any
human being can rightly be called "or-
dinary". Listen to Him as He talks to
fishermen and publicans, to Pharisees
and sinful women, to Pilate and Judas.
He has not changed and human nature
has not changed. The Heart of God
is still reaching out after the love of each
child of God, and the men who are
enduring hardships valiantly at the front
endure "as seeing Him Who is invisible."
The "padre" may not be able to break
through their armour of reserve, but
God can see through it. Let us trust
the Divine Comrade. He understands
how to win the hearts of men—and He
is doing it. Many a soldier, who has
no wish to "go West"—(his way of
describing the Great Adventure)—sets
his face fearlessly when the call comes,
trusting in the White Comrade, and says:

"But grant me, God, to do my bit,
And then, if I must turn West,
I'll be unashamed when my name is
named,
And I'll find a soldier's rest."

DORA FARMCOMB.

Current Events

The Ontario Government has appropri-
ated \$2,000,000 to be lent to urban
and rural municipalities, at the rate of
5 per cent. interest, for building work-
men's homes.

The Supreme Court of Canada upholds
the validity of the Orders-in-Council
abolishing exemptions from military
service.

Lieutenant Quentin Roosevelt, young-
est son of ex-President Roosevelt was
killed last week in a combat with German
aviators.

When German air squadrons, on June
14 bombed Troyes, 60 miles back from
the lines in France, they killed 94 German
soldiers and wounded 74, in the prison
camp at that place. Two French guards
were wounded. On July 15th German
aviators bombed the American Red
Cross Hospital at Jouy, which was plainly
marked, killing 2 and wounding 9.

The great event of the week has been
the splendid victory won by the French
and Americans, assisted by some Italians,
on the old Marne battle front and east-
ward to Rheims. On July 15, the Crown
Prince having evidently determined once
more upon fighting through to Paris,
the Germans began a great drive between
Chateau Thierry and Rheims, using
artillery, tanks, poison gases and air-
planes. On the first day the Allies held
everywhere except at one point where the
French were compelled to retire across
the River Vesle. On the following day
they made an advance of 2 miles depth
east of Mareuil. Then on Thursday,
July 18th, in the midst of a terrible
thunderstorm Foch launched his counter-
attack, using great numbers of tanks,
large and small. The enemy were
completely surprised, and for 7 or 8
hours were everywhere driven back,
almost in rout, the French and Americans
capturing, during the first day over 20
villages, while the Italians took Moulin

as a surprise: st what I've

n at the front o realize the been defined and one who the Presence him a great to church?" ked; and the treet tries its ctive services her side, in egations. It ered lookers- eligious (and ay) imagine ous" people crowded con- preacher, you can fill ple who are w. But the o bring the st, and the uals. Study tice how our y fellowship men—if any called "or- He talks to o Pharisees and Judas. man nature art of God love of each n who are at the front is invisible." ole to break rserve, but et us trust understands en—and He r, who has his way of ntire)—sets call comes, e, and says:

d' Ardre, west of Rheims. The total report, for the first three days' fighting, was 20,000 prisoners taken and more than 500 guns, and by Sunday night the enemy was driven completely back from the Marne. So great has been the victory that the crisis of the war is now believed to be past. While these events were taking place at the southern extremity of the Western front, far to the northern end of it Scottish troops took Meteren, near Bailleul, capturing 300 prisoners, while the Australians to the south of that place advanced their position taking 80 prisoners. These successes are effective in the protection of Hazelbrouck, which is an important railway centre.

The Dollar Chain

For the soldiers and all who are suffering because of the war. Contributions from July 12 to July 19: "Toronto", \$2; Mrs. G. L. Mickle, Wallaceburg, Ont., \$5.

Previously acknowledged.....\$5,566.00

Total to July 19th.....\$5,573.00

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

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.]

War Cookery For Summer Menus.

Lettuce Soup.—Boil in 3 cups water, 2 cups of outer leaves of lettuce. Add 1 small onion, 1 chopped cabbage, 1 slice stale bread, salt and pepper to taste. In 30 minutes add 2 cups rich milk, thicken slightly with flour and serve very hot with brown biscuits for luncheon or supper.

Vegetable Consomme.—Take 1 carrot, 2 onions, stalk celery, 1 cup chopped turnip, 1 cup chopped cabbage, 1 cup stewed tomatoes, 1 teaspoon molasses, 1 teaspoon salt, dash of cayenne, 3 teaspoons oil or a little more of butter, 1½ quarts cold water. Do not peel the vegetables; wash them and chop fine. Cook them in the molasses and oil until slightly browned, then turn in the other ingredients and simmer for 1 hour. Serve very hot with toast or brown biscuits. This may be made into a vegetable salad by adding 1 tablespoonful of powdered gelatin to the pint. Soften the gelatin in a little cold water and add to the boiling mixture; stir well but do not let boil. Put in a cold place over night to harden. Serve sliced, with mayonnaise.

Nut Cake.—One-half cup cornmeal, ½ cup barley flour (barley meal, well sifted will do), ¼ cup cornstarch, ¼ cup melted butter, ¼ cup corn syrup, 4 level teaspoons bakingpowder, ½ cup milk, 1 beaten egg, ½ teaspoon salt, ½ cup chopped nuts. Mix dry ingredients, stir in the butter and other ingredients and bake in a rather shallow sheet. Spread over the top 2 extra tablespoons corn syrup mixed with 1 teaspoon cinnamon.

Irish Stew.—Two lbs. lean mutton cut from the best end of a neck, 2 quarts pared and sliced potatoes, 6 medium onions sliced. Put a layer of the potatoes and onions in a baking-dish, sprinkle with salt and pepper, then put on a layer of the meat cut in bits, then more vegetables, and so on until all are used. Pour in boiling water, broth or gravy to come nearly to top of last layer. Cover and cook gently on top of the stove or in the oven for about 3 hours. A good dish for wash-day.

Moulded Salmon.—Remove skin and bones from a tin of salmon (any cooked fish will do). Mix together ½ tablespoon each of mustard and salt, 2 tablespoons sugar, and yolks of 3 eggs, 1 cup thin cream and ¼ cup vinegar. Cook over hot water until like custard. Remove from fire, and two-thirds tablespoon granulated gelatine soaked in ¼ cup cold water, and strain over the salmon. Mix well and turn into a mould which has been

dipped in cold water. Leave over night in a cold place to stiffen and serve on lettuce leaves with cucumber dressing. If the gelatine is omitted and the cooked dressing is mixed, when cold, with the salmon a good salmon salad is the result.

Cucumber Dressing.—Beat 1 cup cream until nearly stiff, add 1 tablespoon vinegar, ½ teaspoon salt and ¼ teaspoon paprika or a dash of cayenne and continue beating until soft. Carefully fold in one pared, chopped cucumber.

The Scrap Bag.

To Exterminate Ants.

Put a few drops of turpentine on a piece of bread and place it wherever the ants congregate.

Good Floor Oil.

A good floor oil is made up of equal parts linseed oil and turpentine mixed with enough Japan drier to make it harden over night. The floor must be very clean and dry.

Polish for Patent Leather.

Mix together 1 part linseed oil and 2 of cream. Apply with a flannel and polish off with a soft cloth.

Very Fine Waists.

Lingerie waists, etc., iron very nicely if dipped in skim-milk instead of starch and ironed while still damp.

Keeping Honey.

Keep honey in the dark, in a warm place and it will not granulate as readily as if kept in the light.

To Remove Rust.

To remove rust on clothes boil them in water to which cream of tartar has been added, a tablespoonful to the gallon.

A Wash-Day Hint.

Have a faucet attached to the tub to drain off the water, also a hose to carry it outside of the door to the kitchen lettuce or radish bed.

Paraffin for Jellies.

As soon as jelly or jam becomes quite cold pour melted paraffin over the top. It will both seal and keep off moulds.

Sunning Jars, Etc.

Bright sunshine is one of the best disinfectants in existence. Wash sealers, milk pails, separator tins, etc., in water to which a little washing soda has been added, rinse them with clear, boiling water, then expose to sunshine for an hour or two, and they will be clean and sweet.

Scorched Linen.

If you chance to scorch white goods when ironing dip the article in soapsuds and expose to bright sunlight. If very badly scorched dip in strong borax-water instead of soapsuds and expose to the sunlight, repeating until the mark disappears.

Invert Jars.

Invert jars when filled with fruit. If there are any leaks pour melted paraffin all over the lid, letting it run over the top of the jar. It should be just nicely melted, not boiling hot.

How to Save Green Peas.

Green beans may be canned, dried or salted.

Canned Beans.—Choose tender beans, and top and string them. Pack lengthwise in jars; fill up with hot salted water and can in the method given for canning vegetables in May 30th issue of this paper.

Dried Beans.—Pick young, tender beans and dry in the sun or over the stove. Before using pour boiling water over, and as they cool pull off the strings, then boil as usual.

Salted Beans.—Prepare as for cooking, by removing the strings, then pack in a crock in layers with a sprinkling of salt between. Invert a plate over the beans and put a weight on. Soak and drain before cooking.



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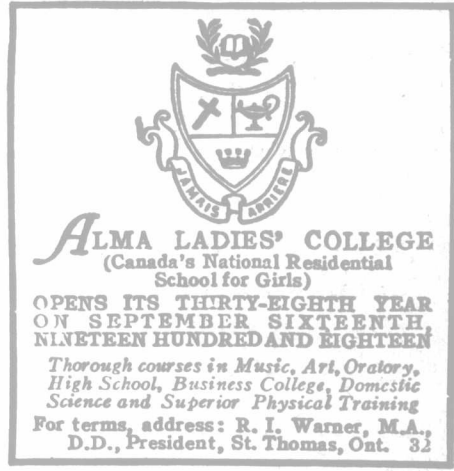


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"Substitutes" Order Deferred.

Because of the limited supplies of substitutes for wheat flour at present available in Canada, in comparison to the demand which would result from the operation of the recent order of the Canada Food Board, requiring the use of substitutes in certain proportions by bakers, confectioners, public eating places, and private households, the Canada Food Board has deferred until a date to be fixed, the operation of certain sections of that order.

Order is Modified.

Bakers, confectioners, public eating places and private households will not, for the present, have to use one pound of substitutes to every four pounds of wheat flour in baking. They must, however, use one pound of substitutes to every nine pounds of wheat flour as provided in the law now operative. Dealers in eastern Canada, as well as in western Canada, for the present will be required to sell one pound of substitutes only with every four pounds of standard flour.

The use of a label or sticker on bread is made permissible and not compulsory. The attention of the police authorities is especially called to this change in the original order.

One clause of the new order urges upon bakers to prepare for the use of 20 per cent. of substitutes, which will be made compulsory at the earliest possible date.

White Bread Unpatriotic.

The Canada Food Board's statement relative to the new order says that the public must not expect white bread. The statement continues: "To demand white bread is unpatriotic at a time when all bakers are required to use substitutes for wheat flour in bread-making. The darker the bread, the more likely it is that the baker has complied with the Food Board's regulations."

Mr. Farmer---

We Believe You To Be Fair

We Know You Realize That There Are Two Sides To Every Story
and That a Fair Square Hearing is Every Man's Right

So, we, the Canadian Manufacturers' Association, ask you to read our views (published at our own expense) on the subjects of Tariff and Co-operation as presented in an address by Mr. S. R. Parsons, Retiring President of the Canadian Manufacturers' Association in Convention before this body, at Montreal, June 15th, 1918

"Speaking broadly, Canada must choose between the Tariff with Manufacturers on the one hand, or free trade without manufacturers on the other; the issue cannot be dodged and should not be clouded."

"The Tariff is not simply a matter of give and take between manufacturers and farmers. What about labor? What about railway companies, the merchants, the financial institutions, the people at large? The Tariff affects everybody."

THERE are two subjects of sufficient importance to claim our particular consideration this year and upon which we should focus our attention. I have, therefore, concluded to disregard all precedent, which, if followed, would constrain me to deal in a somewhat discursive manner with many matters of interest to our Association and the country at large.

The first question has to do with the relationship between employers and employees, and the second the problems of the tariff, particularly as affecting manufacturers and agriculturists. In discussing these topics, I am sure you will agree with me in saying that we should lay aside any ingrained prejudices or conclusions which would prevent us from reaching decisions that are unselfish, broadminded, and national in scope. As men holding a high and important place in the nation's affairs, we should feel that unless we approximate in spirit many of our members, as well as hundreds of thousands of others who have without reserve given themselves freely to the service of the country in defence of the things that we all hold dear, we are disqualified for dealing with important interests which have to do more particularly with the nation's life at home. From an intimate knowledge and association with the manufacturers of Canada, far and wide, I know that as a body they are characterized by the highest ideals of citizenship and service.

"Capital and Labor."

First, then, let us consider the question which is usually dealt with under the heading of "Capital and Labor." We have

been learning many things during the past four years and while all sorts of doctrines, theories, and even fads are being put before us which are more or less impracticable in character, yet it would be a great pity if the fine idealism which is being preached could not be turned to useful account as far as possible. The thing which we call democracy is revealed more in spirit than in organization or regulations. If democracy is going to be anything more than a label on an empty bottle, it must characterize our human relationships and actions. We have, perhaps unconsciously, ignored to some extent the human element in giving effect to the relationship existing between employer and employee. In the old days when in small shops the so-called "master" worked with his men, often at the same bench, and each called the other by name, there was continuous friendly intercourse which resulted in producing good relations throughout. Afterwards, with the introduction of machinery, there was brought about an industrial revolution. Instead of the small shop with few workers there was the great factory, with many hands, so that it soon came to pass that employer and employee did not often meet or even know each other.

The result in many cases has been that the workers came to look upon themselves as part of the machinery of the organization to be used solely in the interests of the producing capacity of the business. It was quite natural, therefore, to expect that disagreements would arise between the two chief interests involved that have led here and there to occurrences of which neither side could possibly be proud. We have now come to see that

just as the human body cannot do its best work unless the integral parts are acting together, so in the case of our great industrial system, there must be a living spirit of working together in order to complete service. We have had, perhaps, more or less of the external form and have boasted too much about the body of democracy when having little of the soul. Looking around us, and especially in Old World countries, though not unknown even in Canada, there are armed camps of Capital and Labor. I have no hesitation in saying that these should find some method of union. These two classes must stand together in their own interests. There must be a meeting ground where antagonism and suspicion shall not dwell. The situation at present is aptly described by the quotation:

"In the world of industry, employers explain too little, employees exclaim too much, economic teachers proclaim only a bias, and politicians only de-claim. There is no one to interpret—no, not one."

Better Relationships.

Now, the question is as to how to bring about a better relationship. No one will question the advisability of trying to regain an attitude akin to that which prevailed in the seventeenth century, when there was a glory and a pride in trade and craft, which has been largely lost out of our industrial life. What a day it would be if we could make a song of our work instead of a dirge of our grievances! Capital, on the one hand, must realize the duty of caring for the welfare of all those associated in industry, and Labor must be ready to co-operate to the fullest possible extent in a spirit of helpfulness. My own opinion is that each individual industry will work out its own plans applicable particularly to the special conditions governing the concern. Many schemes, some of them quite elaborate, have been brought forward in Great Britain, providing for a more effective co-operation between employers and employees. In the United States some plans of co-operation have already been put into effect and others are being considered. Everywhere there is the feeling that the time has come when most earnest consideration should be given to this im-

portant matter. Nearly all the plans which have been put forward carry with them the idea of representation in our great manufacturing enterprises from both Capital and Labor. In some industries a committee of ten or twelve is appointed, half of whom represent the company and the other half the employees. These representatives are charged with the duty of dealing with matters such as employment, discipline, right of appeal, wage adjustments, and joint conference. In a certain industry employees after one year's service are insured at the expense of the company, the amount varying from \$500 to \$2,000; in case the employee leaves the service of the company, he takes his policy along with him and keeps up the insurance if he wishes to do so. Annuities are also provided after twenty years of service.

No one industry can be a pattern for all, as the ability to deal with such questions is not shared equally. It appears to me that it is impossible for us to develop immediately a satisfactory plan of co-operation that might suit all the different industries with their varying conditions. There is, however, no reason why a start should not be made and some headway gained. The evolution of processes must be gradual; the new heaven and the new earth will not burst upon us in a day. Personally, I am not at all afraid to trust representatives of our workmen to join in plans of co-operation in the interests of all concerned. When we think of what our men from the ranks of Labor have done in this great war, coming forward largely under voluntary enlistment, and when we realize further the valor they have displayed on the battlefield, they are not only entitled to proper recognition at home, but to a consideration of their interests, which hitherto they have not had in large enough measure.

One thing appears to be certain, namely, that where individual interest, ambition, and good work are shown, these must all be recognized by both interests in the business and properly rewarded. On the other hand, the unwilling and the inefficient must not block the path of the ready and the skilful. *There can be no universal betterment applying to each and every worker in any scheme of co-operation without individual participation, if we are to hold our own against other countries and nations whose competition we have to meet*

air
Story

views

both at home and abroad. I would like, however, to see such a spirit of mutuality and co-operation engendered that the two great classes would think together and not apart. I believe this would result in such efficiency in all our organizations that we would be able to increase our home and foreign trade, help pay our war obligations, make reasonable profits, and pay higher wages than would otherwise be possible. It should be remembered that as from the ranks of Labor a very large proportion of our men have gone to the front, so when the war is over, to the ranks of Labor they will be returned. Much as we would like to see the returned men go upon our farms, yet the great majority will naturally revert to their former occupations. They will, therefore, be a charge for the promotion of their interests upon our towns and cities and the manufacturing industries in particular. We cannot begin too soon to lay our plans for giving effect to that particular form of co-operation which will fit our individual concerns best and enable employers and employees to serve one another.

Our second great question is that dealing with

Manufacturers, Agriculturists, and the Tariff.

More than a generation ago the National Policy was brought into existence and, therefore, the great majority of men doing business to-day in Canada do not remember the hard and trying years before its introduction in 1878. At that time the country was making little headway under a revenue tariff of 12½ per cent. Our industries were comparatively unimportant and American factories supplied us in large measure with products such as have since been made in Canada. Generally speaking, the commercial interests of the country were languishing and our bright young men were attracted in large numbers to the United States, a country being built up and prospered under a policy of protection. We are now in danger, especially on account of the propaganda of one section of our population, of failing to profit by experience, losing our balance, and blindly yielding to the demand for undermining that which has proved to be the great bulwark of our national, industrial, and commercial life.

The War-time Tariff Truce.

It was understood, when Union Government was formed, that the agitation of the Western grain growers for the abolition of the tariff would not be continued during the period of the war. This has been denied by some of the grain growers during the session of Parliament just ended, but a newspaper report of an address by Honorable T. A. Crerar, at Winnipeg, in the election campaign states:

"The Minister of Agriculture alluded to a conversation with a farmer in Toronto the other day, who asked him:

"What concessions did you get on the tariff?"

"I required no concessions," declared Mr. Crerar. "The Tariff is not the issue at present. I feel just as strongly on the question of tariff as any man. I have not sacrificed these views in entering a Union Government. The tariff is not the issue at present. The great outstanding issue is the winning of this war."

The Toronto Globe referred editorially to this matter and spoke of it as a "truce"; in fact it was more or less the general expression of opinion at the time

of the formation of the Union Government that tariff matters would not be referred to until the war was over. The manufacturers, therefore, accepted this view and would have respected same throughout if others had done so. We have found, however, that in the Western Provincial Legislatures resolutions have been passed asking for the removal of the duty on agricultural implements as a so-called "war measure". In farmers' papers and other organs there has been carried on a constant agitation against the tariff and denunciation of the manufacturers. Grain growers have recently challenged manufacturers to come out openly and declare themselves upon the tariff question. Much as we would have preferred that there be no consideration of this question during the period of the war, as all our attention should be fixed

accomplished. It surely is not necessary to do this, however, at the expense of other classes and at the risk of ruination of our great industrial fabric, built up with great care and national efficiency. A great Toronto daily sets forth admirably the relation of manufacturers to agriculturists in the following words:

"If agriculture is the backbone of the Dominion, industry is the sinew and brawn. Each is vitality important; they are interdependent. Progress and prosperity for one invariably means progress and prosperity for the other. Their success provides food or their failure provides famine for the people. Trade balances depend upon their activity. A favorable balance swells Canada's bank roll, and the people become prosperous and very happy under normal conditions."

"Speaking Frankly and Sincerely"

The portion of this address referring to the Tariff was given in response to a direct challenge of the Grain Growers Guide [the official organ of the organized grain growers of the West] to the President "to speak frankly and sincerely and come right out into the open on the tariff question." In its issue of June 19th the Guide says:

"The Canadian Manufacturers' Association has had its annual convention and S. R. Parsons, the president, just retired has spoken. True to the intimation given through his recent letters to The Guide, he "came out into the open" and spoke frankly about existing differences of opinion with regard to the tariff. A digest of his speech as well as a summarized report of other features of the Canadian Manufacturers' Association convention appears elsewhere in this issue. It ought to be read closely by all grain growers, for Mr. Parsons, accepting the suggestion frequently offered by The Guide, has strongly urged that a conference between manufacturers and grain growers be held in Winnipeg some time this year. The dominant note sounded by Mr. Parsons in his address of last week at Montreal was national unity—a unity which would enable the manufacturer, the workman and the farmer to live and work together in Canada for the good of the country as a whole. This desire was expressed by Mr. Parsons in words of deep fervor, and we are told that his speech was received with great applause by the manufacturers who attended the convention."

As only excerpts from the address have appeared in the press, the Canadian Manufacturers' Association have concluded to publish it in its entirety for the benefit of the public, it being endorsed unanimously by the large Annual Meeting of the Association recently held in Montreal.

upon our national obligations with respect thereto, yet some measure of action has been forced upon us and it is, therefore, necessary to deny many of the unfair, erroneous, and misleading statements that have been made for the purpose of trying to prejudice the minds of the public against manufacturers and manufacturing interests of this country.

Agriculture and Industry Interdependent.

Our statements should be prefaced with the remark that the manufacturers of this country, along with all other classes, are vitally interested in the success of the agriculturists and will not be satisfied until the fullest possible measures looking to their betterment and the removal of any inequalities or unfair burdens, are

Reciprocity.

We are told that especially in the West, peopled so largely with American citizens of an excellent class, there is more or less of a demand for reciprocity, if not a closer connection, with the United States, which, perhaps, is quite natural, particularly among the class referred to. While as Canadians we value more than ever our friendship with the great nation to the south of us, yet we believe we have an important part to play as an integral portion of the great British Empire and in working out our own future. When there was an agitation for reciprocity, in 1911, and which certain elements in our population are now trying to revive, the majority of the people decided against it and in favor of a continuance of our national,

political, and fiscal policy and entity. As nothing has occurred since to lead us to believe that we were mistaken at that time, it is perhaps well now to emphasize our views and refresh our minds on the question by referring to what the then President of the United States thought of the reciprocity campaign and of its effect upon Canada as well as the United States. In a letter written at the time to Colonel Roosevelt and made public afterwards, President Taft said:

"The amount of Canadian products we would take would produce a current of business between Western Canada and the United States that would make Canada only an adjunct of the United States. It would transfer all their important business to Chicago and New York with their bank credits and everything else, and it would increase greatly the demand of Canada for our manufactures. I see this is an argument against reciprocity made in Canada, and I think a good one."

We all know that Mr. Taft is an extremely capable business man as well as politician, and he recognized at once what even a measure of reciprocity, such as was then proposed, would mean to both countries. It would thus appear that our shrewd friends in the United States saw in the proposition what some of our Canadian politicians and others were blind to. The war-time measures of reciprocity that have been created are hardly a valid argument for their operation in normal times from a national standpoint. Surely we would not be foolish enough now to want to place our country in the condition so well described by Mr. Taft, nor are we ready to believe that our destiny lies in a severance of Empire ties. Already Great Britain is taking steps to bind all parts of the Empire together in closer commercial relations for after-the-war trade. We in Canada have helped to create, as well as bear, heavy Empire war burdens and this ought to be followed by our full share of peace responsibilities; in fact our national and our Empire obligations must now be paramount in our thoughts and plans and receive greater and more serious attention than ever in the past.

Hostility to Manufacturers.

It would appear from the propaganda being waged with such vehemence against the manufacturers of Canada that the chief view presented is that the tariff is retained solely to benefit the manufacturers and to oppress all other classes of the people, the farming community in particular; in fact, one of the leaders in this propaganda in a recent article, which throughout is full of abuse of the manufacturers, commences the same by quoting from Sir Wilfrid Laurier in June, 1893, as follows:

"But I appeal to your judgment in the face of the experiment of the last fifteen years under the system which was introduced by the Conservative party, which was dubbed the 'National Policy,' to say if that system was not vicious in principle, iniquitous in its terms, and dangerous in its consequences, I say that it is vicious in principle."

Now this quotation is evidently brought forward to give the farmers of the West the view that Sir Wilfrid Laurier is the apostle of Free Trade and a non-believer in the National Policy. It would have been more honest had the writer stated that when Sir Wilfrid came into power and was in the saddle for so many years he found the retention of the National Policy as reflected in the tariff, to be entirely necessary in order that proper revenues might be raised for the country.

The writer in question further refers to the manufacturers in his "Hymn of Hate" as follows:

"It is conclusive proof that the 'infant' we have so tenderly nursed for fifty years has become a selfish giant, as ruthless and destructive as the one we are sending our armies to resist in Europe to-day. Never before in the history of our country has the mailed fist of special privilege so plainly shown itself."

Trade and Tariff Board.

It is, therefore, quite evident that the time has come when the manufacturers of this country can no longer keep silence, either in their own interests, the interests of Labor, or the great national interests of this country. It should be remembered that the present tariff, with changes here and there, was enacted as a great national policy, not for the benefit of any one class, but for the well-being of the nation at large. No one who is not ignorant of the subsequent history of our Dominion can say that it has not justified its existence. An enormous revenue has to be raised in any case and in no other way can the amount produced by the tariff be raised so easily and fairly as by the present methods, which at the same time incidentally give reasonable protection to our great manufacturing industries. Manufacturers feel that the tariff could and should be changed here and there, and so amended that it would apply more scientifically than it does at the present time. For this and other reasons, the manufacturers would like to see created what might be termed, "A Trade and Tariff Board"; such a Board to be composed of representative men of actual experience and wide knowledge of commercial conditions and whose broad outlook and vision would fit them particularly for the proper study of these great questions so vital to our national interests, this Board to report to the Government from time to time their findings and if after a full and complete survey of the situation, it be clearly established that the tariff is inimical to the best interests of the country at large; nay, more than that, if it is not actually essential from a national standpoint, then, I say, "Away with the tariff."

Not Simply Give and Take.

The time has arrived when we must all face this matter in a sincere and broad-minded fashion. It surely cannot be simply a matter of give and take as between manufacturers, on the one hand, and grain growers on the other. Labor must be consulted and considered, the transportation interests of the country (now so largely controlled by the Government) must have their say, the great financial institutions of the country, wholesale and retail business, producers controlling our mines, forests and fisheries, are all vitally interested in the question of the tariff and must clearly have a voice as to its retention or otherwise. In giving expression to the convictions of manufacturers in this manner, we should at the same time be glad to meet the grain growers of the West and would do our part to try and bring about a conference to be held a little later in the season in the city of Winnipeg; this conference to be followed by other meetings, if necessary. We desire most earnestly to co-operate with our fellow-producers and to show them in the frankest manner our problems and to be shown by them their handicaps, in order that we may each of us see where changes could possibly be made that would be of mutual benefit and help.

Industrial Protection Essential.

We would, however, be altogether

insincere and dishonest did we not state in general terms that if there is one thing more certain than another, it is that manufacturers could not possibly exist in this country without the small measure of protection which the tariff affords them. The two stand or fall together. Speaking broadly, Canada must choose between the tariff with manufacturers on the one hand or free trade without manufacturers on the other; the issue cannot be dodged and should not be clouded. Living alongside a populous country of highly specialized industries, catering to a home demand of twelve times as many people as we have in Canada, it would be suicidal for us to attempt to compete, or develop our new country on the basis of free trade. It is, perhaps, interesting to note that, notwithstanding the enormous population of the United States and the great home markets that are open to them, they have found it necessary, in their own interests, to retain a large measure of protection by means of the tariff. Even under the present democratic Government, reduced schedules, the average rate of duty paid on imports of dutiable goods coming into the United States for the year ended June 30th, 1916, was 30.67 per cent., while in Canada, for year ended March 31st, 1917, it was only 23.78 per cent., so that our own tariff is approximately only about seventy-five per cent., as high as the American tariff on dutiable goods. The War Tax of 7½ per cent., although added to the cost of imported goods, free and dutiable, was not proposed or desired by the manufacturers. It would appear, therefore, that those who complain of our high tariff walls have not full knowledge of our comparative position in this matter. It should be remembered that manufacturers pay heavy duties on much of their imported raw material; for instance, a large machinery-manufacturing concern in Toronto have advised me that while the tariff on their finished article would appear to give them a protection of 27½ per cent., yet their figures over a number of years show that the average rate of duty they pay on their raw materials is 25 per cent. The protection to the manufacturer in this particular case, as in the case of very many other lines is, therefore, reduced by the amount of duty paid on the raw materials, leaving only an extremely moderate margin of actual protection.

Honorable Chas. A. Dunning, Canadian Director of Production, is quite too good a business man not to see very clearly that even the removal of duties on agricultural implements for the farmer means that much additional burden of taxation to the population as a whole. In making his report covering the proposed removal of duty on agricultural implements, he stated he was "not concerned with questions of tariff reform, federal revenue, questions of permanent fiscal policy, or the age-long issue between free trade and protection." Just so; if these important national considerations may be completely ignored, the whole question is extremely easy of solution. Be it remembered, though, that the two million dollars said to be raised yearly from duties on agricultural implements, if not so produced, would have to be shouldered by the people at large.

Should the Burden Be Shifted?

At this particular time in our national history, when employment for returned soldiers is going to be a matter of paramount importance, and when the largest possible revenue must be obtained in all directions to carry our gigantic war debt, the question may fairly be asked: "Is the farming industry languishing to such an extent that in order to help it out, there

must be destroyed, or even impaired, its fellow-producer, the manufacturing industry of this country?" In fact, the weakening of the latter from our standpoint would mean partial destruction of the former. However, perhaps some figures and statements sent out by the Grain Growers' Guide (the official organ of the agriculturists of the West) to prospective advertisers, would help to make clear the question as to the condition of the farming population. It is stated that, based upon the figures for 1917, there will be 60,000 motor cars purchased in 1918 in the three Prairie Provinces, having an average value of \$1,000 per car, making an investment of sixty million dollars, and that another ten million dollars' worth of accessories will be purchased. It is further stated that while in the United States the farmers bought forty per cent. of the cars sold in 1917, the proportion sold to farmers in Western Canada was twice this figure. It is further stated that "Western Canada, and especially the farmers of Western Canada, should, therefore, be the best prospects for your sales efforts in 1918." Another significant statement reads:

"A recent investigation, conducted by the Grain Growers' Guide, into nearly three hundred districts in Manitoba, Saskatchewan and Alberta, confirms emphatically the oft-asserted claim that nowhere, and with such unanimity over such a wide area, is nature so bountiful or is the return per capita from farm life so profuse as in Western Canada."

"The following data is taken from this investigation:

Average size of farm.....	382 acres
Number of farms owned.....	92½%
Number of farms rented.....	7½%
Average acreage under crop.....	195 acres
Average value of farm holdings.....	\$11,010
Average number of persons per farm home.....	5

"The wealth, as indicated above, is concretely illustrated by the official list of automobile licenses issued in Western Canada in 1917. The average for the Dominion of Canada as a whole is one auto to every fifty-seven people. The average for Western Canada (Manitoba, Saskatchewan and Alberta), is one auto to every twenty people."

Value of Cereals and Other Crops.

The figures given also emphasize the fact that in 1917 the cereal crops alone averaged in value per each farm \$3,725, and that the average capital worth (land, buildings, machinery, live stock), was, as stated above, over \$11,000, and that the average capital worth of the Grain Growers' Guide subscribers was \$25,878. Taking their own figures of the average value of farm holdings and the average returns for the past three years, it shows that the cereals alone, without counting any other crops, have produced thirty-two per cent. per year upon the capital. There are many other extremely interesting and very satisfactory figures and statements given, all showing the great progress the agriculturists of the West are making. Now, in addition to the cereal crops mentioned in the Grain Growers' Guide circulars, we have figures issued in a bulletin by The Nor-West Farmer, taken, it is stated, from 1917 final crop and live-stock reports of the Provincial Departments of Agriculture in Manitoba, Saskatchewan and Alberta. A study of these reports gives the total value of farm products, other than cereals, at a little larger figure than the total value of all cereals. It is fair to assume, therefore, that on the average all the expenses of farming operations would be more than met by the production of other than cereal crops,

whether such products were sold or retained to add to the farmer's capital. This, then, would leave at least the profit on cereals as net returns, and I do not hesitate to say, after careful calculation, that it would be quite double the average net profits of manufacturing during the same period of three years.

The first year (1915) was disastrous, generally speaking, in manufacturing, and while the last two years have been unusually profitable in many lines, yet in others war conditions have brought paralysis. No class in Canada, however, rejoices more in the prosperity of the farmers than the manufacturers. We realize that unless producers in all classes in the country, whether engaged in farming, manufacturing, mining, fishing, lumbering, or other forms of industry, are prosperous, it is utterly impossible for the country as a whole to progress as it should. It would appear, however, from the figures given by the agriculturists themselves, as quoted above, that just now is not an opportune time for them to ask other classes of the population to assume burdens of taxation which they would like to be relieved of.

It is interesting to note that the total number of farmers in Canada holding ten acres and over is 633,748, or about equal to the total number directly engaged and employed in manufacturing.

Industrial Statistics.

Now, in order to ascertain what the National Policy has done for Canada, and is doing in the building up of our great national interests, it might be well to refresh our minds with some statistics. In the year 1915 returns show that the total number of people engaged in manufacturing on salary and wage-earners was 514,883. If we consider the munitions-making and other industries, in which women are now largely employed, we might fairly estimate the total number to-day as being about 650,000. If we multiply this number by two and one-half we should probably reach the total number directly dependent upon the manufacturing industry for their livelihood, making 1,625,000. If we add to this total the number of people who indirectly make their living on account of the total industrial dependents, we should add from twenty-five to fifty per cent., the number varying according to conditions governing different localities. This division would include farmers and truck gardeners, railway (steam and electric) workers, banking interests, civic employees, butchers, bakers, storekeepers, caterers, etc., etc. Adding only twenty-five per cent., this would give a grand total of over two million persons. The total capital employed is estimated at two and one-half billions. The total exports of manufactured products last year was \$682,521,000. A comparative estimate of our main products for home and foreign consumption for the year 1917, according to the "Canadian Annual Review," is as follows:

Manufactured products.....	\$2,000,000,000
Field crops.....	1,100,000,000
Dairy products and live stock.....	1,300,000,000
Forest products.....	176,000,000
Minerals.....	200,000,000
Fisheries.....	34,000,000
Eggs, fruit, etc.....	40,000,000

It might be interesting to try and figure out what it would mean in the case of a great manufacturing centre like the city of Hamilton to have its manufacturing industries removed. The total population of Hamilton is 106,000, having increased from 52,000 in 1900. The total number of manufacturing plants is 340;

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the total capital invested \$110,000,000; the total number of hands employed, including office and travelling staffs, 30,000; total wages and salaries paid per year, \$25,000,000. Statistics show that upwards of fifty United States concerns have located branch industries in Hamilton, representing a capital investment of about \$25,000,000. These concerns, of course, would not have located in Canada except for the incidental protection which the tariff affords. Considering the extreme industrial activity at present in a place like Hamilton, calling for large numbers of women workers, it is probable that only about two and one-half times the actual number of hands employed would be directly dependent upon industry, making a total of say, 75,000. If we add to this even twenty-five per cent. more, as being indirectly dependent upon industry, we have a total population of over 90,000 dependents (direct and indirect) for their living upon the manufacturing industries. Any interference in any large way with the tariff which now enables these manufacturers to do business would practically wipe out the city of Hamilton. What is true of Hamilton would be measurably true of many other towns and cities.

Agricultural Implements.

We might also ask what would be involved in the question of removing the duty on agricultural implements? There are approximately 160 firms in Canada making one or more lines of agricultural implements, so that the figures given below do not include many agricultural implement manufacturers who make other lines as well, nor do they include companies subsidiary to or dependent on the agricultural implement industry. The number of agricultural implement plants proper is sixty, total capital employed \$60,000,000, total wages and salaries \$7,000,000, estimated number of people directly and indirectly dependent upon the implement business 40,000 to 50,000. Now, it is quite possible that if the duty were removed on agricultural implements (and it must be remembered that the rate of duty is considerably less than manufacturers have to pay on any machines imported for use in their factories), and the duties were also removed from the raw materials entering into the manufacture of such implements, a few of the larger concerns might still live on account of their large foreign export business; yet as they purchase millions of dollars worth of supplies of all sorts from other manufacturers in Canada, all such secondary concerns would be adversely affected immediately, and there would be a general weakening and tearing down of a large portion of the industrial fabric of the country throughout. Figuring the total duty paid on agricultural implements in 1916, and taking the total value of the property of the farmers throughout Canada, it means 3½c. for every \$100, or in other words a farm valued at \$10,000 would pay on the average annually \$3.50. This does not seem like a staggering obligation by way of contribution to the national funds. The removal of the duty on tractors, without any consultation with the tractor manufacturers, to see what they could do to help out the situation calling for greater production, and without even making provision for the rebate of the duty on raw materials imported by the tractor manufacturers, was an unfair and unjust measure. We made such representations to the Government that they finally rebated the duty charges on raw materials, but the tractor industry, where hundreds of men were employed and others in anticipation, as well as hundreds of thousands of dollars already invested, has been paralyzed, at all events for the present.

Manufacturers' Contributions and Obligations.

Manufacturers are, however, quite

tired of the abuse that is being heaped upon them from interested quarters, and while it is readily admitted that there may be many schools of economists of widely divergent views, yet it is high time that a policy of standing together in our national interests be adopted, and that we should emphasize the need of common honesty and sincerity, being shown in the statements that are being circulated. The profits of manufacturers, generally speaking, have been grossly exaggerated, and while here and there abnormal figures are shown (which are subsequently largely extracted by the Business Profits Tax), yet the large profits feature also applies in the case of agriculturists. The great majority, however, of these two classes, as well as of all other classes in the country, are simply making reasonable and necessary headway. Let us look at what manufacturers have helped to accomplish in the last three and one-half years.

1. Manufacturers have contributed more largely than any other class to the furnishing of men for the colors.
2. Manufacturers in large numbers have entered into personal obligations with those of their men who may return as to giving them employment. As this matter of employment will be one of the most insistent questions after peace is declared, it might pertinently be asked how manufacturers can fulfil their part of the compact if the fiscal policy of the country is to be radically changed?
3. Manufacturers have been called upon to assume greater burdens of taxation than possibly any other class, and especially the farming community.
4. Manufacturers have, perhaps, more largely than any other class, contributed to all patriotic funds which have been launched.
5. No class has subscribed more liberally to all Government war loans, and it must be remembered that in very many cases those so subscribing have undertaken large obligations at their bankers to enable them to do this. Manufacturers would greatly regret being placed in such a position, either by reason of removal of the tariff or taxation measures, causing strangulation of industry, that would not permit them to continue such relationship towards future Government undertakings.
6. No class has supported the farming community as much in the way of helping to supply men for the garnering of the crops, and in many cases even paying the difference in wages over and above what the farmer contributed.
7. If it had not been for the manufacturers of this country the Allies would not only have been short of munitions, but the country would have gone bankrupt on account of the balance of trade being against us. This war industrial activity has been recognized by Sir Frederick E. Smith, Attorney-General of Great Britain, in the following sentence: "She (Canada) has developed for war purposes a resource of manufacturing ability of which no one could have supposed her capable."

The time has arrived, therefore, when the Government, members of Parliament, and the people at large must be fair to the manufacturers of this country and not consider their interests as a football to be kicked about by interested politicians and others, otherwise the national interests are sure to be adversely affected. The tirade of abuse has already gone too far.

Australia's Attitude.

By way of contrast it is interesting to note that in Australia the Prime Minister Mr. Hughes called all the manufacturers together in conference and outlined to them a very definite scheme calling for their help and promising the co-operation of the Government for the furtherance of industry and especially to try and secure export business; in other words the Government of Australia is so seized with the necessity of maintaining and enlarging her industrial life that the Government commits itself to plans of co-operation that are most commendatory. In a remarkable address at Melbourne, Mr. Hughes closes with these eloquent and significant words:

"I do not hesitate to say that with proper organization we can increase the output of the primary and secondary industries very substantially. We can rapidly increase our export trade. We can place industry on a firm basis by an organization which will aid the individual producer to increase his output find him markets for his product and ensure trans-

port at reasonable rates thereto. And in this way we shall reduce the burden imposed upon us by this great war, rapidly develop our resources find regular employment for our people at high wages and attract large numbers of the right kind of immigrants. The war has brought to us as to all the nations of the earth many and grave responsibilities. We must be prepared to shoulder them. We have not only to produce more wealth to pay for the war and to develop this our glorious heritage but we have to hold it for the Empire and for our descendants. But there is something greater. That far-flung domain known as the British Empire produces every mineral known to man and every variety of the animal and vegetable kingdoms. Its wealth is uncountable its resources illimitable. Organized it can control the world; unorganized it must fall a victim to a more efficient nation, and its wealth pass through divers channels to alien hands. A deep and lasting obligation rests upon all the dominions to play well their part in this great plan of national organization, without which we are undone. Inexorable circumstances, patriotism, and common prudence alike compel us to adopt such a policy as will at once develop our resources, increase our production, and ensure our national safety."

Great Britain and Industry.

Great Britain realizes that in order to hold her own as a nation and maintain her prosperity, she has not only to do everything possible to get hold of trade again, which she has temporarily lost during the war, but she must also put herself in a position to regain that which other nations, particularly Germany, have taken away from her during recent years, largely on account of governmental direction and help. All sorts of guilds and associations are being formed, acting under the supervision and co-operation of the Government in Great Britain, to secure the fullest measure of trade for British industries. Sir Albert Stanley, M.P., President of the Board of Trade, said recently:

"He could not help thinking, perhaps wrongly, that past Governments of Great Britain really failed to take into account the fundamental fact that this was a commercial era, and that the efficient conduct of the great industries of the country was absolutely vital to its welfare. Unless industries could be carried on with an equal degree of efficiency, unless they could produce their manufactured products at prices that would compare favorably with those of their great foreign competitors, what chance had the country of succeeding in establishing its place with the other nations of the world? He thought that the governments from now on would take an infinitely greater interest in industry, and would make it their business to see that it was carried on efficiently, and that there would be secured to the country the establishment of industrial enterprises which would make it absolutely secure against dependence on any foreign country for any essential commodity."

Canada Being Poisoned.

In Canada, however, not only have we received no direct help and lead from the Government in connection with planning for our industries after the war in the nation's interests, but a considerable section of our population is keeping the country in a foment of agitation which would tend to destroy rather than to build up. *There is only one way to pay off our accumulated war debts, and that is by producing in field, forest, mine and factory all that we possibly can, and selling these products at as high a margin over the cost of production as we are able to secure.*

As far as export trade is concerned, manufacturers in Canada may be forced in the national interests to sell their wares at a merely nominal margin of profit so as to help preserve the balance of trade and at the same time give employment to the largest possible number of people. The crux of the situation calling forth denunciation of industry, we believe to be just here. *Interested parties have poisoned the minds of agriculturists and other classes in this country and have led them to believe that the manufacturers not only received directly an enormous advantage from the tariff which they were not entitled to, and in consequence were making profits which were out of all proportion to the risks involved, but were also actuated by the most selfish motives. It is, therefore,*

opportune to say fairly, honestly, and emphatically that the average net return from the investment of capital in industry is not more than it should be to encourage men to take the risks incident thereto. Further, while here and there large profits have been made by manufacturers, as is also the case of agriculturists and other classes, yet the history of the past generation shows thousands of abandoned industrial enterprises in which men have lost their all, just as there have been abandoned farms that were not made to pay.

In the United States, according to recent returns made to the Federal Trade Commission, out of 250,000 trading and manufacturing concerns over 100,000 earn no net income whatever; in addition 90,000 of them make less than \$5,000 per year, some of whom have very large capital invested. It is the same thing in Canada; the few succeed, whom we all hear about from the housetops, and the many either just get along or languish and die.

Agriculture Needs Home Markets.

The Old-world countries are already taking steps to make themselves more self-contained and self-supporting in the matter of foodstuffs. It may not be long, therefore, before the agriculturists of this country realize that they must depend more largely than ever before upon the home markets. To this end, manufacturing industries, if encouraged, should be established all through the West as soon as the population is able to take care of them and raw materials may be secured. No nation can become great that is concerned solely with agriculture. *Every important country in the world, except Great Britain, has found it necessary to adopt a policy which gives protection to its home industries, and many believe that she will be forced to fall into line after the war is over. Under free trade, agriculture has not prospered.* A writer in *The Athenaeum*, for February, 1918, in a remarkable article, admits that he was "brought up to revere free trade," but believes the time has arrived for fresh consideration and revision. He says: "The politicians must now see that it is life and death for England, and for English men and women; it is no game for political struggles, no academic arena for non-participant, detached philosophers."

This section of my address would not be complete without the statement that the challenge of the grain growers, through their official paper, to the manufacturers to declare themselves on the tariff, and to which I was compelled to respond, led me to study the question from their standpoint, as well as ours. If the figures given do not tell all the story, and the agriculturists of the West are not receiving proper consideration, then we should be the first to co-operate with them in trying to remedy their difficulties.

There is said to be a condition existing among the truck farmers and gardeners of the East whereby they receive only an average of thirty-five cents as their portion of every dollar's worth of products sold. If this is correct, it is a wrong that should be righted, and for this purpose the facilities of our Association would be placed at the disposal of those interested.

Concluding Words.

In concluding my address, I desire to thank my fellow officers, the members of the Executive Committee and of the Council, as well as the membership throughout, for the remarkable sympathy, support and confidence so often expressed during my term of office. This association and experience have been to me a source of happiness and joy, that will cheer me throughout the rest of my life. I am sure that I can bespeak the same consideration for my successor.

I should also like to give utterance to my warm feelings of esteem towards our loyal, hard-working and efficient staff at Head Office and at all the Branches. We have a splendid organization extending from sea to sea, and that is being used to further the interests of trade and commerce throughout our glorious Dominion.

It is a time to build up and not tear down—a time for co-operation and not opposition—a time to stand to our tasks and not be found shirking—a time to act unselfishly and not be moved by greed—a time for national unity and not discord—a time to fight our battles bravely and not lose faith in God that right, not might, will soon rule all the world.

A Bargain!

1 CASE TRACTOR purchased new 1917, and completely overhauled this spring—in excellent order.

1 BISSEL TRACTOR DISC, 14 feet—good as new.

1 COCKSHUTT TRACTOR three-gang plow—good as new.

List prices of above are nearly \$1,500; will sell the lot for \$1,000 spot cash, f.o.b. cars St. Catharines.

Reason for selling, no further use for them.

Glen Athol Fruit Farms, Ltd.
R. R. No. 2, St. Catharines, Ont.

Food Will Win the War

Serve your country and yourself by raising FOOD on the fertile plains of Western Canada. The Canadian Pacific Railway makes it easy for you to begin. Lands \$11 to \$30 an acre; irrigated land up to \$50; 20 years to pay. Loans to assist settlers on irrigated lands. Get full particulars and free illustrated literature from

G. A. Muddiman,
Land Agent, C.P.R.
Montreal, P. Q.



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.

WANTED TO HEAR FROM OWNER HAVING farm for sale. Mrs. Booth, Pulaski, Iowa, U.S.A.

FOR SALE

I. H. C. Tractor, 8-16, and 3-Furrow Oliver Plow Attached. Both good as new. Will sell cheap, or exchange for horses or cattle.

J. J. MERNER, Seaforth, Ontario

FOR SALE

20-horse power Stickney gasoline engine and one 7-horse power Stickney engine will be sold cheap. Have installed electric power. Write or wire W. A. DRYDEN, BROOKLIN, ONTARIO

Patent Solicitors—Fetherstonhaugh & Co. The old-established firm. Patents everywhere. Head Office: Royal Bank Building, Toronto. Ottawa Office: 5 Elgin St. Offices throughout Canada. Booklet free.



BABY CHICKS AT REDUCED PRICES. 16% off in June, 33% off in July. Buy your chicks now for spring layers. Barred Rocks, Rhode Island Reds, White Wyandottes, White Leghorns. Satisfaction guaranteed. Tay Poultry Farm, Perth, Ont.

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.

WANTED

Live Fowl

WALLER'S, 702 Spadina Ave., Toronto
WRITE FOR PRICE LIST

New Uses For Potatoes.

Potato Pie.—Cream together 1 cup sugar and $\frac{1}{2}$ cup butter. Add yolks of 3 eggs, 1 teaspoon each of nutmeg and cinnamon, 2 cups mashed potatoes, juice and grated rind of a lemon, $\frac{1}{4}$ cup of grape juice and the stiffly-beaten whites of the eggs. Pour into the pastry and when baked sift powdered sugar over the top.

Potato Cookies.—Cream 1 cup shortening with 2 cups sugar. Add 2 eggs, 2 cups hot mashed potatoes, 1 teaspoon nutmeg. Lastly stir in 1 teaspoon soda dissolved in 1 cup sour milk. Add flour to roll thin, sprinkle with sugar and bake.

Potato Doughnuts.—Cream 1 cup sugar with 1 cup mashed potatoes and 1 tablespoon shortening. Add 1 beaten egg and $\frac{1}{2}$ cup milk, then $1\frac{1}{2}$ cups flour, 4 teaspoons (level) of baking powder, $\frac{1}{2}$ teaspoon salt and same of nutmeg. Add more flour if needed. Make into doughnuts and fry in hot deep fat.

Potato Chocolate Cake.—Like the doughnuts this cake keeps well. Cream together 2 cups sugar and two-thirds cup butter. Mix with 1 cup mashed potato and $\frac{1}{4}$ cup melted chocolate or cocoa. Add alternately $\frac{1}{2}$ cup milk and $2\frac{1}{2}$ cups flour sifted with 2 teaspoons baking powder, 1 teaspoon cinnamon, and $\frac{1}{2}$ teaspoon each of nutmeg and cloves, and 1 teaspoon salt. Fold in at last 4 beaten eggs, and bake in a loaf pan in a very moderate oven about an hour.

Potato Sandwiches.—Mash together 1 cup cold potato, $\frac{1}{2}$ cup cream cheese, enough onion juice and salad dressing to moisten well. Use as filling.

Markets

Continued from page 1245.

Montreal.

Horses.—No interest was displayed in this market, though some dealers report that there seems to be a tendency towards an increased demand for saddle and wagon horses. It is thought that this may be due to the tendency noted here and there to go back from the automobile to the horse for driving purposes. Prices were unchanged, with heavy draft, weighing 1,500 to 1,700 lbs., selling at \$250 to \$300 each; light draft, 1,400 to 1,500 lbs., \$200 to \$250 each; light horses, \$125 to \$175; culls, \$50 to \$75, and fine saddle and carriage horses, \$175 to \$250.

Dressed Hogs.—No change has taken place in the market for dressed hogs, and abattoir fresh-killed stock is selling in a wholesale way at 29c. per lb.

Potatoes.—Old stock potatoes are no longer desirable, and the best trade is looking entirely to new stock, although old will continue to change hands. No. 1 stock sold at \$7.25 per barrel, and No. 2, at \$5.75, this being for new, while old Quebec white potatoes were \$2.65 per bag of 80 lbs., ex-store.

Maple Syrup.—The turnover of maple syrup was not large and supplies were light. Quotations were \$1.90 to \$2 a gallon, in wood; and \$2.10 to \$2.25 for 1-gallon tins. Sugar ranged around 22c. at country points.

Eggs.—The weather was very hard on the quality of eggs, and it is now exceedingly difficult to obtain reliable stock. During the week, prices were very strong, and select stock was up several cents a dozen, at 50c., while No. 1 stock was 46c.; and No. 2 stock 41c. to 42c.

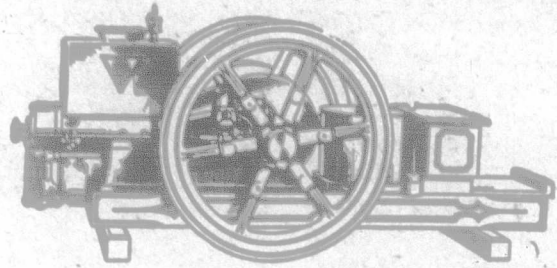
Butter.—The consumption of creamery was quite large, and there was an active turnover of choicest, at 43 $\frac{3}{4}$ c. to 44c. per lb., while fine quality was $\frac{1}{2}$ c. less. Dairies ranged from 37c. to 39c., according to quality.

Cheese.—Commission prices were 23c. per lb. for No. 1; 22 $\frac{1}{2}$ c. for No. 2 cheese, and 22c. for No. 3.

Grain.—No. 2 Canadian Western oats were up in price, at \$1.02; No. 3 were 99c.; extra No. 1 feed, 99c.; No. 1 feed, 96c.; and No. 2 feed 93c. per bushel, ex-store. American yellow corn, \$1.85; sample grades, \$1.32, ex-store.

Flour.—Rye flour was firm, at \$14 to \$14.50 per barrel, in bags. Barley flour was higher, at \$12.50 to \$13.00 per barrel, in bags. Oat flour was in good request, at \$12.80. Buckwheat flour \$14.50; corn flour, \$12, being steady. Standard Ontario winter wheat flour \$11.40 per barrel, in new cotton bags, and Manitoba spring wheat flour \$11.05 per barrel, in bags, delivered.

Millfeed.—The market was firm. Bran



Alpha Gas Engines SAVE

Work No more operating your pump, turning your cream separator, running your churn or washing machine by hand.

Time and Money No more hauling your feed to the mill to be cut or ground, or hiring someone to come to your place and grind it for you. A small cutter or grinder and your Alpha would always be ready.

Fuel The Alpha uses gasoline or kerosene, and much less of either than any other make of engine.

An Alpha Gas Engine will soon pay for itself on your farm

Write today for our catalogue which describes in detail all the twelve sizes of Alpha Gas Engines and shows why the farmer who buys the Alpha gets the most for his money.

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

Farmers! Big Prizes

THE TORONTO FAT STOCK SHOW

Will this year offer large premiums for classes of 3 steers, must be fed ninety days by owner.

Premium List ready August 1st.

For further particulars write the

Secretary, care Union Stock Yards, Toronto

NORTHERN ONTARIO

Millions of acres of virgin soil, obtainable at 50c. an acre in some districts—in others free—are calling for cultivation.

Thousands of farmers have responded to the call of this fertile country, and are being made comfortable and rich. Here, right at the door of Old Ontario, a home awaits you. For full particulars as to terms, regulations and settlers' rates, write to:

H. A. MACDONELL, Director of Colonization, Parliament Buildings, Toronto, Ont.
G. H. FERGUSON, Minister of Lands, Forests and Mines.

\$35; shorts, \$40; mixed mouille, \$51. Barley feed \$61, and feed cornmeal, \$68. Hay.—This was the one article which continued cheap. No. 2 was \$14.50 to \$15 per ton, ex-track; No. 3, \$13; clover mixed, \$6 to \$10, and inferior grades \$4 per ton, ex-track.

Hides.—Shearling lambs were up to \$2.40 each; otherwise, prices were steady with cow hides at 18c.; bull hides, 16c.; steers, 24c., flat; or 20c., 21c. and 22c. per lb., Montreal inspection. Milk calf

skins, 55c. each. Horse hides \$5 to \$6.50 each. Tallow 3 $\frac{1}{2}$ c. per lb., for scrap fat; 8c. for abattoir fat; 16c. to 16 $\frac{1}{2}$ c. per lb., for rendered.

Cheese Markets.

Cornwall, 22 $\frac{1}{4}$ c.; Montreal, finest Eastern, 22 $\frac{1}{4}$ c. to 23c.; New York, special, 25c. to 25 $\frac{1}{4}$ c.; average run, 24 $\frac{3}{4}$ c.; Watertown, N. Y., 24c.

A BETTER SEPARATOR AT A LOWER PRICE

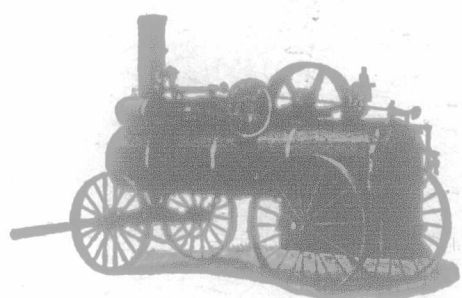


VIKING CREAM SEPARATOR

The Viking Cream Separator is made of the finest materials. It is scientifically constructed by separator experts. The Viking skims to a mere trace, has greater capacity, is easy running, simple to clean, strong and durable yet lowest in price. Write for Free Separator Book.

Swedish Separator Company
Dept. 8 6185, Wells St., Chicago, Ill., U.S.A.
WAREHOUSES
Calgary, Alberta, Winnipeg, Manitoba, Regina, Saskatchewan

Rebuilt Portable and Traction Engines



A number of good rebuilt engines from 14 H.P. up, suitable for Threshers' and Farmers' own use.

SEPARATORS



New and rebuilt Separators, all sizes from the individual Farmer's Thresher to the largest size.

WRITE FOR FURTHER PARTICULARS
The Robt. Bell Engine & Thresher Co., Ltd., Seaford, Ont.

MESSRS. A. J. HICKMAN & CO., (Late Hickman & Scruby) Court Lodge, Egerton, Kent, England; Exporters of PEDIGREED LIVE STOCK

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.

SUNNY ACRES ABERDEEN-ANGUS

A FEW YOUNG BULLS READY TO WEAN

G. G. CHANNON

P. O. and Phone Oakwood, Ontario

Railway Connections—Lindsay, G.T.R. & C.P.R.

Alloway Lodge Stock Farm

Angus - Southdowns - Collies

SHOW FLOCKS

Rams and ewes. Heifers in calf to Queen's Edw. rd 1st prize, Indiana State Fair.

Robt. McEwen, R. R. 4, London, Ont.

ABERDEEN-ANGUS MEADOWVALE FARM, Forest, Ont.

ALONZO MATTHEWS H. FRALEIGH
Manager Proprietor

Beaver Hill Aberdeen-Angus

Males and females.

ALEX. MCKINNEY, R.R. No. 1, Erin, Ont.

Dr. Bell's Veterinary Medical Wonder, 10 C90 \$1.00 bottles FREE to horsemen who give the Wonder a trial. Guaranteed for Colic, Inflammation of Lungs, Bowels, Kidneys, Fevers and Distempers, etc. Send 25c. for mailing, packing, etc. Agents wanted. Write address plainly.

DR. BELL, V.S. Kingston, Ontario

BEAVER HILL Aberdeen-Angus

MALES AND FEMALES

ALEX. MCKINNEY, R. R. No. 1, ERIN, ONT.

Careful Reading.

Some who have made observations are of opinion that we are not "readers", but only "glancers". We pick up the daily paper and glance hurriedly over its pages. This performance is repeated daily. Here and there, perhaps, we pause for a moment at some headline which announces something of unusual interest, but we soon hasten on.

We treat books of fiction in the same way. Of course we try to get an idea of the subject, a bare idea, and we think we have done well, and are able to talk a bit on it.

The excuse is made that much of the literature is of so poor quality that it is only worth a glance. There is truth in this, but there are many things written which are worthy of our best thought.

Parents should take time each evening to teach their children to read, not merely to say the words, but to get the thought of the writer. Single paragraphs are best to start with. This is the best way to cultivate in the young mind a desire for careful and thoughtful reading.

This brings the parents and children nearer to each other. The best reading material will add to the knowledge of both. The care exercised in reading will form for the children habits which will add to the value and influence of their lives in the community.

Careful reading saves the reader from many mistakes, and from the humiliation of being told that he has missed the point. It gives him a store-house of reliable information from which he can draw at any time, and makes him a power in the world.

The careful reader will select the best books. Some may be hard, but the harder the book, the greater will be his joy when he has mastered it, and the task of mastering it will be worth while.—ED. MCLAREN.

The Sultan's Lesson.

A Sultan placed before his throne one day
Three vases—one of gold, one amber,
and one clay,
And, when his seal was set upon each urn,
His three sons, at his bidding, chose in turn.

Upon the golden vase "Empire" was writ;
Resplendent jewels all around it stood:
The eldest grasped that vase and opened it,
But shrank to find it brimming full of blood.

"Glory" upon the amber vase shone bright;
Fresh wreaths of laurel twined the letters o'er:
The second seized it quick, but, ah, sad sight!

'Twas filled with dust of heroes known no more.

No word was written on the vase of earth;
But still the youngest son advanced his claim;

He opened the urn amid the courtiers' mirth,
And nought was in it save God's holy name.

The Sultan to the throng of courtiers turned,
And asked which of the vases weighed the most;
Various the thoughts that in their bosoms burned
And came to speech among the glittering host.

The warriors said: "The golden vase of Might";

The poets said: "The amber vase of Fame";

The sages said: "The vase emblem of Right—

The earth is lighter than God's written name."

Then said the Sultan: "Sons, remember well

The meaning of the lesson read to-day;

When the scales tremble betwixt heaven and hell,

The name of God will all the rest outweigh."

—From Alger's Oriental Poetry.

The Rubber Plant Again.—Mrs. Timmid.—"John, wake up! There's a man downstairs; I'm sure I heard a noise that sounded like a yawn."

Husband.—"Oh, go to sleep. What you heard was probably the rubber-plant stretching itself."

ONTARIO WIND ENGINE & PUMP CO. LIMITED

TORONTO SILOS

See the Hip Roof

IT will put money in your pocket. Get tons more ensilage in a Toronto Silo than in any other silo costing about the same to erect. The hip roof lets you tramp down the ensilage right up to the top of the walls.

Now consider the construction of a TORONTO Silo. All woodwork is carefully selected spruce, thoroughly impregnated with hot tar and creosote. The wood cannot rot and is not affected by ensilage acids.

Then Toronto Silos are airtight because the staves are DOUBLE tongued and grooved—double protection against frost as well as air. The Toronto Silo booklet sent upon request.

Ontario Wind Engine & Pump Co., Limited
Atlantic Ave., Toronto.
12 St. Antoine St., Montreal.
Winnipeg Calgary Regina



BROOKDALE FARM HEREFORDS

Having purchased the old-established herd of Mr. Thos. Skippon, I can offer some good values in females, cows with calves by side and bred again. A few good open heifers left.

W. READHEAD MILTON, ONT.

Lake Marie Farm Shorthorns

Herd Sire—Golden Hope, an Orange Blossom by the great Archer's Hope. We have several young bulls by him and four other 8 months calves by the R. O. P. sire St. Clare. All are priced to sell. We are also pricing a few fresh Dutch Belted cows and heifers. This breed although not well known in Canada are extra heavy milkers. Correspondence solicited.

LAKE MARIE FARMS, KING, ONT.
SIR HENRY PELLATT, Owner THOS. McVITTIE, Manager.

PINEHURST STOCK FARM

Young Shorthorn bull for sale, rising 2 years, of good dual-purpose type and out of a record cow—large size—good handler and sure getter. Will sell right to quick purchaser.

G. W. CARTER, Proprietor R.R. No. 4, Ilderton, Ont.

MAPLE HALL SHORTHORNS

Present offering, 7 yearling bulls; One Cruickshank Duchess of 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, ONTARIO

Dual-Purpose Shorthorns

—CROWN JEWEL still heads the herd. Present offering is 5 bulls from 13 to 18 months. Prices from \$200 to \$250. Also some good breeding females, either bred or with calves at foot. All registered and priced to sell.

JNO. ELDER, HENSALL, ONTARIO

GLENGOW SHORTHORNS

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

WM. SMITH, COLUMBUS, ONTARIO. Myrtle, C.P.R., Brooklin, G.T.R., Oshawa, C.N.R.

Robert Miller, Stouffville, Ontario

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. FETTY, FREEMAN, 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

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 Ladies, 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.

Sprucedale Dual-Purpose Shorthorns

I am offering my herd sire, Braebur Prince; dam, Bessie of Low Banks 2nd, 11,636 lbs. of milk in R.O.P. Good individual, sure and right. Also a few calves by him, as well as some nice young litters in Berkshires. FRANK TEASDALE, (Concord G.T.R. Station, 100 yards) CONCORD, ONTARIO

Ring-Bone

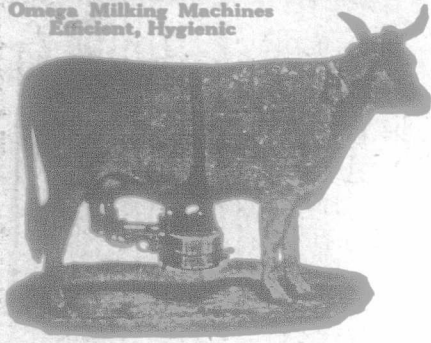
There is no case so old or bad that we will not guarantee
Fleming's Spavin and Ringbone Paste
 to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and can be done in 5-minute applications. Works just as well on Saddlebone and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a lameness, write for a free copy of

Fleming's Vest Pocket Veterinary Adviser
 Ninety-six pages of veterinary information, with special attention to the treatment of lamenesses. Durable bound, indexed and illustrated. Make a night beginning by sending for this book.

FLEMING BROS., Chemists
 71 Church St. Toronto, Ont.

Omega Milking Machines

Efficient, Hygienic



The pail and teat cups are suspended from the cow's back. The teat cups cannot fall on the floor and suck up manure or straw. The Omega has no rubber tubes. The Omega milks as fast and as clean as is possible by hand. Leading dairymen in Canada, U. S. A. and Europe are using the Omega. It's a perfect milker.

Write to-day for free booklet describing the special features of the Omega.

C. Richardson & Co., St. Mary's, Ontario.

Flintstone Farm

Breeders of Milking Shorthorn Cattle, Berkshire Swine, Belgian Draft Horses.

The misfortune that follows the unwise selection of animals for a herd need hardly be dwelt upon.

Certainly, if it was not economical to maintain an inefficient animal before the war, now it is uneconomical and unpatriotic.

Many men are buying the best pure-bred stock, who in a less critical time might have worked with animals of lower merit.

But in the present situation they do not care to chance even the trial of inferior animals for the sake of a temporary saving in the purchase price.

DALTON
 Massachusetts

SHORTHORNS FOR SALE

Good animals of both sexes. Burlington phone and G.T.R. Jct. Radial every hour from Hamilton.

C. N. Blanchard, R. R. 2, Freeman, Ont.

Mardella Shorthorns

Herd headed by The Duke, the great, massive, 4-year-old sire, whose dam has 13,599 lbs. of milk and 474 lbs. of butter-fat in the R.O.P. test. I have at present two exceptionally good young bulls ready for service, and others younger, as well as females all ages. Some are full of Scotch breeding, and all are priced to sell. Write or call.

Thos. Graham, R.R. No. 3, Port Perry, Ont.

Evergreen Hill R.O.P. Shorthorns

Herd headed by the R. O. P. bull, St. Clare. Nothing for sale at present.

S. W. Jackson, R. R. No. 4, Woodstock, Ont

GLENFOYLE SHORTHORNS

College Duke 4th in service—a high record son of Rothschild and Taylor's noted stock. Am offering young cows and heifers, bred to this great bull. Have a few bulls of breeding age on hand.

Stewart M. Graham, Lindsay, 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

Spruce Lodge Shorthorns and Leicesters

Herd headed by the Butterfly-bred bull, Roan Chief Imp. =60865=. Young bulls, cows, and heifers of all ages, of good breeding and quality.

W. A. DOUGLAS, CALEDONIA, ONTARIO

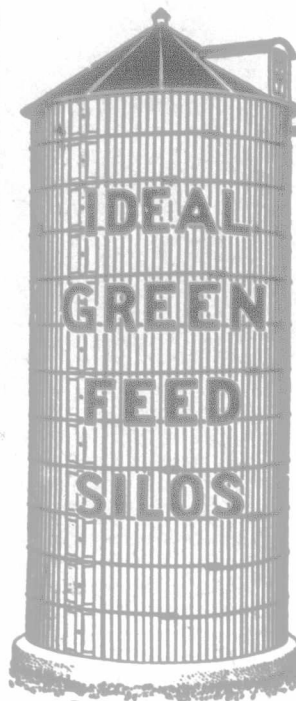
The Formation of Diamond

The formation of diamond is a subject which has apparently commanded greater attention from eminent scientists than has been generally known. As a mere scientific achievement, the possibilities had a peculiar attraction, altogether apart from any commercial potentialities. It has long been known that the diamond is almost pure carbon, being converted to charcoal at high temperature, and burning in oxygen with the production of carbonic acid gas in the same proportion as pure carbon. If the transformation of diamond to charcoal takes place at high temperatures, what may be the possibilities of the reverse change, and, if effected, what are the prospects of commercially producing diamonds?

As crystalline carbon the diamond is worth millions of times as much as its amorphous allotrope, charcoal. Crystallization usually occurs during solidification from gas, liquor or solution. Metals crystallize on solidification from fusion, while salt and sugar crystallize from saturated solutions. Can carbon be made to crystallize from either of these conditions? As far back as 1880 Marsden showed that black diamonds were to be found in a mass of silver melted in a carbon crucible and raised to the temperature of melting steel. The first systematic investigation, however, was carried out by Professor Henri Moissan. Charcoal dissolves freely in iron at a very high temperature. With ordinary cooling the carbon separates as graphite. No diamonds result from slow cooling. Some consideration of the conditions likely to obtain in the formation of diamonds in nature led Moissan to a method which strikingly achieved success.

The procedure followed by Moissan, and the hypothesis which dictated it, came under critical review based on experiments extending over nearly forty years, brilliantly conceived and skillfully carried out by the Hon. Sir Charles Parsons, F.R.S., who unfolded his methods and results before the Institute of Metals recently. Methods of research, involving the production of extraordinarily high temperatures and pressures, were adopted in order to test Moissan's fundamental conception of the formation of diamond. The experimental work involved the application of enormous pressures—sustained or instantaneous—to graphite and carbon liquids, such as benzene, paraffin, treacle, carbon tetrachloride, and carbon disulphide. Upwards of 200 chemical reactions were arranged to deposit carbon under high pressure with central heating by electrical methods. The products were examined by the analytical methods adopted by Moissan and Crookes. Small residues of diamond, which occasionally occurred, appeared to be due to unintentional iron in the charge. Attempts were then made to melt carbon in bulk, but the greatest change appeared to be a slight alteration in the structure of the graphite. The same conclusion had been reached by Threfall, who found that, under a pressure of 100 tons, graphite electrically heated remained graphite. Still higher temperatures and pressures were obtained by the rapid compression of an oxy-acetylene flame with an excess of acetylene to supply the carbon. The evidence showed that a pressure of 15,000 atmospheres had been reached, but nothing more than a little brown amorphous powder easily destroyed by boiling sulphuric acid and nitre resulted. In this experiment it was calculated that the extraordinary temperature of between 15,000 deg. C. and 17,700 deg. C. had been attained. Other tests were made with which there is no space to deal.

Sir Charles Parsons, as the result of his work, advances the view that occluded gases, especially carbon monoxide, are responsible for diamond formation. Thus the weight of diamond found in an ingot in one case reached one part in 20,000, or about one-thousandth part of the carbon present, a quantity of about the same order as the amount of carbon present as occluded carbon monoxide. Having experimentally disposed of the bulk-pressure theory, and also in no less striking a manner shown that quick cooling of itself is similarly ineffective, attention was given to experiments suggested by the presence of diamonds in meteorites. By electrical heating of carbon in vacuo down to 1-6 mm. mercury, and even down to X-ray tube pressures, it was found that in no experiment with vacuum higher than 2 mm. mercury was diamond produced, but it



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Weldwood Farm, Farmer's Advocate, London, Ontario

SHORTHORNS LANDED HOME

My new importation of 60 head will be at home to visitors June 20th, and includes representatives of the most popular families of the breed. There are 12 yearling bulls, 7 cows with calves at foot, 24 heifers in calf, of such noted strains as Princess Royal, Golden Drop, Broadhooks, Augusta, Miss Ramsden, Wimple, etc. Make your selection early. Geo. Isaac, (All Railroads, Bell Phone) Cobourg, Ont.

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.

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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

Shorthorns Herd headed by Pride of Escana, a great son of Right Sort. Several bulls and a few females with calves at foot for sale. Herd of over seventy head.

A. G. FARROW (between Toronto and Hamilton), Oakville, Ont.

PLEASANT VALLEY FARMS

Present offering—A number of good young Scotch cows with calves at foot and rebred to (Imp.) Newton Grand Champion; also a number of 2-year-old heifers bred to same sire. Suitable for good herd foundations; priced to move them. Inspection invited.

GEO. AMOS & SONS, Farm 11 miles east of Guelph, C.P.R. MOFFAT, ONTARIO

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SHORTHORN CATTLE and LEICESTER SHEEP. HERD ESTABLISHED 1855—FLOCK 1848. The great show and breeding bull, Browndale =80112=, by Avondale, heads the herd. Extra choice bulls and heifers to offer. Also a particularly good lot of Leicester rams, mostly from Imp. ewes.

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Herd of seventy head, straight Scotch, good individuals. Headed by the great show and breeding bull, Sea Gem's Pride 96365, 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.)

BLAIRGOWRIE SHORTHORNS

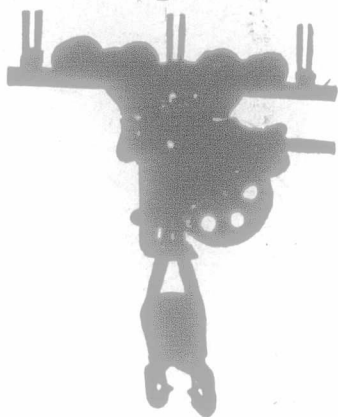
I have females all ages and bulls of serviceable age. Worth while to come and see, or write JOHN MILLER Myrtle Station, C.P.R., G.T.R. ASHBURN, ONTARIO

ESCANA FARM SHORTHORNS

Five Bulls for Sale. One roan senior yearling; one choice twelve months white calf; by Right Sort (Imp.); one select, dark roan, ten months calf; one roan yearling, by Raphael (Imp.); one roan red yearling for grade herd. Farm ¼ mile from Burlington Jct., G.T.R.

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Dovercourt Road, Toronto, Ontario

Holstein Bulls

Ready for service and younger. Cows and heifers bred to ORMSBY JANE BURKE, whose two nearest dams average 38.82 lbs. of butter in 7 days. The three nearest sires' dams and his dam's records average 35.69 lbs. for 7 days, and 112 lbs. milk for one day.

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KING SEGIS PONTIAC DUPLICATE
A 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

LAKESIDE AYRSHIRES
A choice selection of young bulls for sale from Record of Performance dams, imported and Canadian bred.

SIRE: Auchenbrain Sea Foam (Imp) 35758 many times grand champion.
Fairfield Mains Triumph (Imp.) 51137 a son of the noted Hobsland Perfect Piece.
Write for catalogue.

Geo. H. Montgomery, Proprietor, Dominion Express Building, Montreal. D. MacArthur, Manager, Phillipsburg, Que.

JAS. B. ROSS, MEADOWVALE, ONTARIO, for high-producing, show-yard AYRSHIRES. Herd headed by SNOW KING 47376, first-prize two-year bull at Toronto, 1917. Write me also for anything in Yorkshires.
Meadowvale P.O., Streetsville Station

Please mention this paper

occurred in some of the iron which had been ejected from the mass, and had not fully parted with its occluded gases. Considering the action in an ingot cooled simultaneously on all sides, it would appear that the solidified layer at 600 deg. C. is impermeable to gases. As the layer thickens, more and more gas is ejected from the metal and forced inwards. Quick cooling thus bottles up, and concentrates, into local spots and under high pressure, the occluded gases which under slow cooling would have escaped. The diamonds produced are thus under strain.

The striking conclusion finally reached is that diamonds are probably formed at a temperature of about 690 deg. C., or one of the points of recalcence, and that it would seem probable that if a large mass of iron, alloyed with other elements, was submitted to suitable heat treatment, and, after setting, but when still at a temperature at which it is permeable to gas, was subjected to carbon monoxide under pressure, segregations taking place within the mass might result in the production of diamond of payable quantity and size.—From the "Daily Telegraph", London.

Control of the Tobacco Horn Worm.

The results of two experiments, on the Harrow Tobacco Station, in combatting the tobacco horn worm have shown that spraying with Arsenate of Lead, as soon as the worms appear in appreciable numbers, is a most economical and effective method of eradicating this pest.

By spraying not only are all worms then damaging the tobacco killed but, under most conditions, all which hatch within the next few days after spraying are killed also.

Arsenate of Lead may be used either as a dust or powder or in solution. It has been found up until the tobacco is one half grown a solution consisting of six pounds of dry powdered Arsenate of Lead per hundred gallons of water is most effective, the solution apparently covering the plant more completely and adhering to it longer than the powder. However, after the tobacco becomes larger the middle leaves so nearly cover the bottom leaves as to render the solution and spray cart ineffective. Then the dust gun proves most efficient. For use in the dust gun the dry powdered Arsenate of Lead should be mixed with equal parts of dry sifted wood ashes, or if they are not obtainable the next best carrier is dry air-slacked lime. The powder should be applied early in the morning while the dew is still on the tobacco and when there is no wind blowing; at the rate of five pounds of the Arsenate per acre on large tobacco or three and one-half pounds per acre on small tobacco.

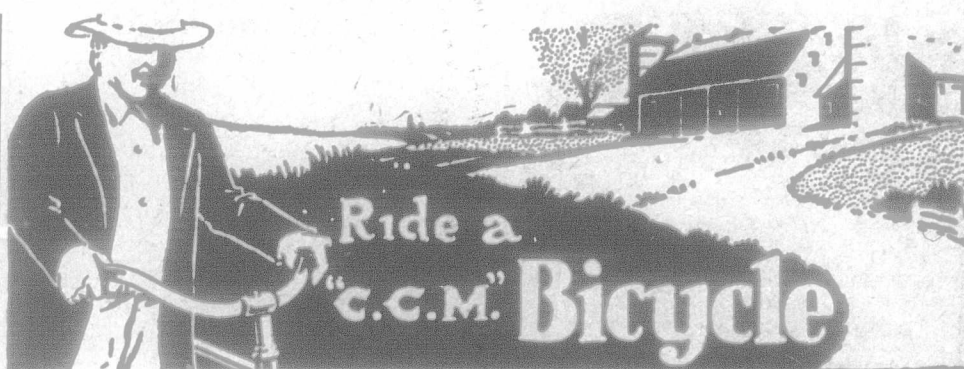
In purchasing the powdered form the buyer should demand Arsenate of Lead having at least 30% Arsenic Oxide; other forms of the poison with smaller Arsenic Oxide content are too slow in their action to give the best results.

If the paste form is used the amounts previously recommended should be doubled as the paste form contains only one half the strength of the powder.

Paris green is also a good insecticide for combatting the worm. However, due to its tendency to burn the tobacco; the fact that it washes off more readily; and the quickness with which it becomes ineffective, as compared with the Arsenate of Lead, the use of the latter is to be preferred.
D. D. DIGGES,
Supt. Harrow Tobacco Station.

Gossip.

James Douglas, of Caledonia, has his recent importation of Leicester landed at home. From all accounts they are a choice lot of 16 shearing ewes. "The North British Agriculturist" has the following to say regarding Mr. Douglas' importation: "They were selected for their good style and breeding, the purity of their color and the cover of their wool. Seven of the shearlings are by the Nisbethill-bred ram, Nisbet Idol, and a number are by Falkland Redoubtable, a son of The Redoubt 4178. The shearlings are of good size and have nicely-cut heads and a good class of wool." Mr. Douglas also has a number of imported rams and shearlings, and a number of home-bred shearlings, which are right good individuals. The imported rams were secured in last fall's importation. Anyone wishing to secure Leicester of high quality should communicate with Mr. Douglas.



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This Mark is Your Protection. Every "C.C.M." Bicycle bears this design on the rear upright.

YOU need a Bicycle NOW as never before. Help is scarce. Feed for the horse is dear. The most sensible and the cheapest means of getting there and back is a "C.C.M." Bicycle—the best that money can buy. Useful in a thousand ways on the farm. No cost for upkeep.

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Twice as easy as walking—Three times as fast

HET LOO PIETERTJE

THE \$12,750 HEIFER

Sold at the great Milwaukee Sale, was only one of the many daughters we have of our senior sire Pontiac Korndyke of Het Loo. We also have sons—brothers to this world's champion heifer; and for the next few weeks, these, along with several other young bulls of serviceable age, are priced exceptionally low. Let us hear from you if interested—at once.
W. L. Shaw, Roycroft Farm Farm on Yonge St., Toronto & York Radial, 1 1/2 hours from Toronto. New Market, Ont.

Manor Farm Holstein-Friesians

If it's a herd sire you want, write me. I have sons of both my senior and junior sires, King Segis Pontiac Posch and King Korndyke Sadie Keyes. All are from good record dams.

Choice bull calves at present to offer—average for two nearest dams, up to 34.71 lbs. butter in seven days. Correspondence solicited, visitors welcome.

Stations: Clarkson and Oakville
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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 \$800.

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 St. Radial - Jefferson, Ont.

Hospital for Insane, Hamilton

We offer bulls only for sale, but they are from some of the choicest cows to be seen in any herd, and bulls equal to the best.

—Apply to Superintendent

Cloverlea Farm Holstein-Friesians

Offers for sale a choice young bull three months old, out of a 20.3-lb. dam. For price and extended pedigree write to

GRIESBACH BROS., COLLINGWOOD, ONTARIO

DUMFRIES FARM HOLSTEINS

Cows for sale, bred to Plus Evergreen, son of Evergreen March,

S. G. & ERLE KITCHEN Bell 'phone. ST. GEORGE, ONTARIO

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

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 Fayne, a son of Queen Butter Baroness, the former 33-lb. Canadian champion cow. Also have others younger. T. W. McQUEEN (Oxford Co.) TILLSONBURG, 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 swine.

C. R. JAMES. (Take Radial Cars from North Toronto) RICHMOND HILL, ONTARIO

SOVEREIGN STOCK FARM

The home of Baroness Madoline; 34.48 lbs. butter in 7 days, 1,043.75 lbs. in 335 days, over 87,200 lbs. milk in 47 months. We are offering a few of her grandsons up to 6 months old.
WM. STOCK & SON, Phone Innerkip 3, on line 25. R.R. No. 1, TAVISTOCK, ONTARIO

SPRUCE GLEN FARM

Herd headed by Nonpareil Ramsden=101081—and Royal Red Blood=77521—. At present we have nothing to sell but we have some very good ones coming on. James McPherson & Sons, Dundalk, Ontario.

Cloverlea Dairy Farm Holsteins

Present offering consists of three choice young bulls ready for service. Will be priced right for quick sale. For price and particulars apply to GRIESBACH BROS., COLLINGWOOD, ONTARIO.

HILLHOUSE AYRSHIRES—F. H. Harris, Mt. Elgin, Ont.

Headed by Burnside Lucky Master Swell, a combination of blood so hard to equal, being of the Masterpiece and Lucky Girl families, a combination which means quality, production and constitution. Ninety head to select from. Special offering—20 yearling heifers and 3 bulls. Inspection invited.

GLADDEN HILL AYRSHIRES

A choice bull calf two months old; sire, Fairvue Milkman, dam, a granddaughter of Primrose of Tanglewyld, for sale. Also a few females.
Laurie Bros., Agincourt, Ontario

IRON AGE
POTATO DIGGERS

Answer the farmers' big questions: How can I get my potatoes out quickly with less help and fewer horses? How can I have my tubers ready for a high market and safely put away before freezing?

The **IRON AGE** Digger rolls the potatoes out in long rows ready to gather, clear of dirt, weeds and tops. It turns short into next row, or can be heeled.

Made in several styles there is an **IRON AGE** to suit your needs. The staunch, powerful, and dependable No. 165 shown here will take care of the heaviest conditions.

Made by specialists in potato machinery, in business over 22 years.

Send for catalog.

THE BATEMAN-WILKINSON COMPANY LIMITED
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Farmers who ship their wool direct to us get better prices than farmers who sell to the general store.

ASK ANY FARMER! who has sold his wool both ways, and note what he says—or, better still, write us for our prices; they will show you how much you lose by selling to the General Store.

We pay the highest prices of any firm in the country and are the largest wool dealers in Canada. Payment is remitted the same day wool is received. Ship us your wool to-day—you will be more than pleased if you do, and are assured of a square deal from us.

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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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Kent or Romney Marsh Sheep

The hardest and best grazing mutton and wool sheep of Great Britain. Successfully acclimated wherever grazing sheep are required. Annual Ram Show and Sale, 300 head, Ashford, Kent, on Thursday and Friday, September 26th and 27th, 1918.

Descriptive pamphlet list of breeders, and all information from A. J. Burrows, 41 Bank St., Ashford, Kent, and at 16 Bedford Square, London, England.

Shropshires

A few choice young rams for sale at reasonable prices, particularly fine strains from registered stock.

MOUNT VICTORIA STOCK FARM
Hudson Heights, Que.

Shropshires and Clydesdales

Besides my regular offering of ram and ewe shearlings, I have the three-year Clydesdale stallion, Cairnbroig Heir 18299. Write quick, don't wait.

W. H. PUGH, Myrtle Station, R. R., Ontario

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

TAMWORTHS

Both sexes, two months old.
GORDON CULHAM

Smithdale, R. R. No. 1, Ontario.

Newcastle Herd of Tamworths and Shorthorns Boars ready for service. Some bred and ready to breed; 2 splendid sows carrying their 2nd and 3rd litters. Boars and sows not akin ready to wean. Mostly descendants of Colwill's Choice, 3-year champion at Toronto Industrial and Imp. Cholder-ton Golden Secret. A few nice Shorthorn heifers in calf, deep-milking strain. Young cows with calves at foot. Long-distance phone.

A. A. COLWILL, Proprietor, R.R. No. 2, Newcastle, Ont

BIG TYPE CHESTER WHITES

Three importations in 1918. From the leading prizewinning herds in the U. S. Over 100 April and May pigs, by imported sires.

JOHN G. ANNESSER, Tilbury, Ont.

TAMWORTHS

Young sows bred for Sept. farrow and a nice lot of young boars for sale. Write:

John W. Todd, R. R. No. 1, Corinth, Ontario

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

Questions and Answers.

Miscellaneous.

Drying Peas.

1. Is it possible for a person to dry garden peas instead of canning them?
2. Can asparagus be grown from seed? When should it be sown to have for use next spring? **C. R.**

Ans.—1. We understand that peas can be dried either over a slow fire or in the sun. By soaking them before cooking they compare favorably with green peas.

2. Asparagus can be grown from seed planted in trenches in the spring, but it takes four or five years from the time the seed is sown until a good cutting of asparagus can be made. The plant must have a hold in the ground before it is advisable to cut it.

Bindweed.

The enclosed weed made its appearance in our garden last year, and our efforts to kill it have proven in vain. It appears as though it might ruin our newly-planted strawberry bed. How do you advise dealing with it? **F. L.**

Ans.—The plant submitted to this office is known as bindweed, a perennial which is very difficult to deal with. It is very persistent. When it is only in a small patch it is advisable to spade it out and burn the roots. Putting on a heavy coating of salt will possibly destroy it, but you would have to apply so much salt that it would render the soil unfit for a cultivated crop for a year or two. Some have destroyed it by covering the plots with a deep layer of manure while others have covered a small patch with building paper. Thus it will be seen how difficult a plant this is to deal with.

Gossip.

Milking Shorthorns at Weldwood.

The herd of milking Shorthorns at Weldwood numbers upwards of fifty, and they are not only in good flesh but the cows in milk are giving a good account of themselves at the pail. A fifteen-acre field of sweet clover has furnished pasture for twenty-three of the herd so far this summer, and from the appearance of the field no other pasture will be required for that portion of the herd. The herd sire, Dominator, a bull of choice breeding and excellent conformation, is leaving splendid stock. Last fall's crop of calves are growthy and in high flesh although they have been raised on skim-milk. There are eight heifers rising one year that from all appearance will make excellent breeding stock. There are three bulls rising one year which will make splendid herd headers for anyone breeding for milk production as well as beef. These calves are richly bred for milk but yet have beef conformation. All three have been raised on skim-milk, consequently are not in so high bloom as they would have been if fed whole milk. The oldest one of the three is a beautiful dark red calf with a strong top and masculine appearance. His dam, a big-framed cow, has a record of 9,000 pounds milk. Then, there is a calf a lighter red in color that is straight, deep and thick with strong masculine character. His dam is in her first lactation and promises to make a good record. His grandam gave upwards of 9,000 pounds of milk in a lactation. The other bull is roan in color and is a growthy, sappy youngster of good conformation. His dam is due to freshen again and gives every appearance of making a big record this year. Mention might be made of the eight spring calves, five heifers and three bulls, which are a growthy lot. In the herd are such cows as Gertrude, a magnificent type of milking Shorthorn cow which has a record of 10,486 pounds of 4.31 per cent. milk; Mina Gem, a cow weighing over 1,500 pounds with 10,340 pounds of milk to her credit; Cherry, giving 9,265 pounds of milk in a lactation, and a number of others with records ranging from 7,000 up to 8,500 pounds of milk. These cows carry good Shorthorn type and conformation. If in need of a stock bull to improve the milking qualities of the herd write Weldwood Farm, Farmer's Advocate, London, or call at the farm.

Lacking in Range.—“Does the new soprano's voice fill the church?”
“No; I noticed some vacant seats up in the gallery.”

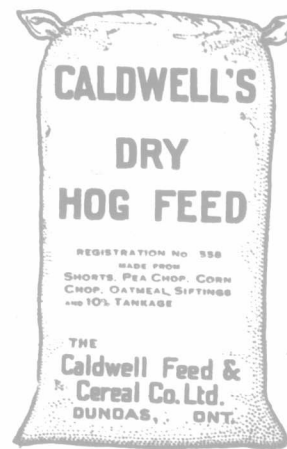
Why Feed Expensive Concentrates to Hogs?

It's the duty of each one of us to economize and save everything fit for human food. Needless expenditure on highly concentrated foods for hog feeding is a waste when

Caldwell's Dry Hog Feed

gets quicker results for you and is mixed to give the best balanced ration for hogs that is possible, and at a low price.

Large hog breeders know its value and use it, and many who have responded to the call of Greater Production by raising hogs use this feed entirely.



The Government analysis shows 18% Protein, 2.5% Fat and 10% Fiber, Oil Cake, Corn Chop, Shorts, Oatmeal siftings, and tankage are used in its make up.

Order early and make sure of quick delivery. If your dealer cannot supply you, write us direct, Dept. 2.

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DUNDAS

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Canada Food Board License 9-7627.

BRAMPTON JERSEYS

We bred and owned the dam, and imported the sire of the champion R.O.P. butter cow of Canada. We own the champion four-year-old R.O.P. butter cow of Canada. To make room for 1918 importation, expected to arrive in May, we are making special offerings of females and bulls, all ages.

B. H. BULL & SON

BRAMPTON, ONTARIO

THE EDGELEY CHAMPION HERD OF JERSEYS

Write us about your next herd sire. We now have sons of our present herd sire, Edgeley's Bright Prince, who is a son of Canada's champion butter cow, Sunbeam of Edgeley. Pay us a visit. Sunbeam of Edgeley is not the only high-record cow we have. We are pleased to show our herd at all times.

JAMES BAGG & SONS (Woodbridge, C.P.R., Concord, G.T.R.) **EDGELEY, ONTARIO**

I HAVE FOR SALE JERSEY COWS and BULLS

Six cows at \$200.00 each; bulls from \$50.00 to \$100 each. **T. HETHERINGTON, c.o. 481** from Island Blood sires. Strictly guaranteed as represented. **Aylmer Street, PETERBORO', ONT.**

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JERSEYS
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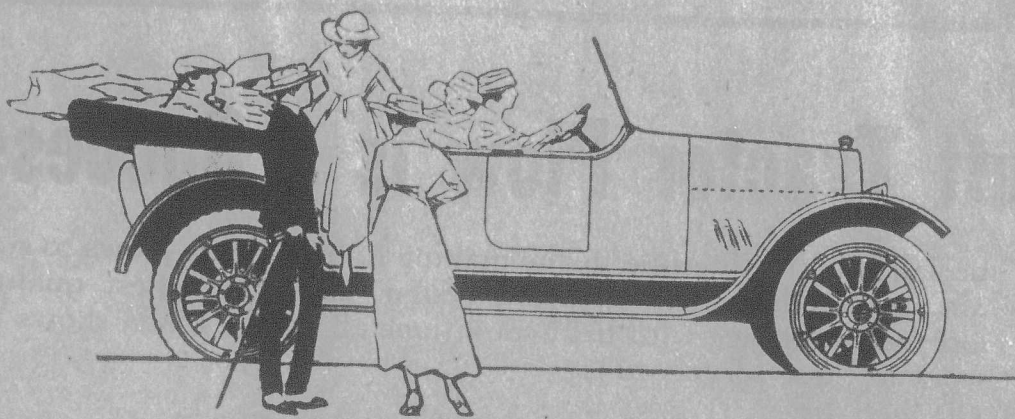
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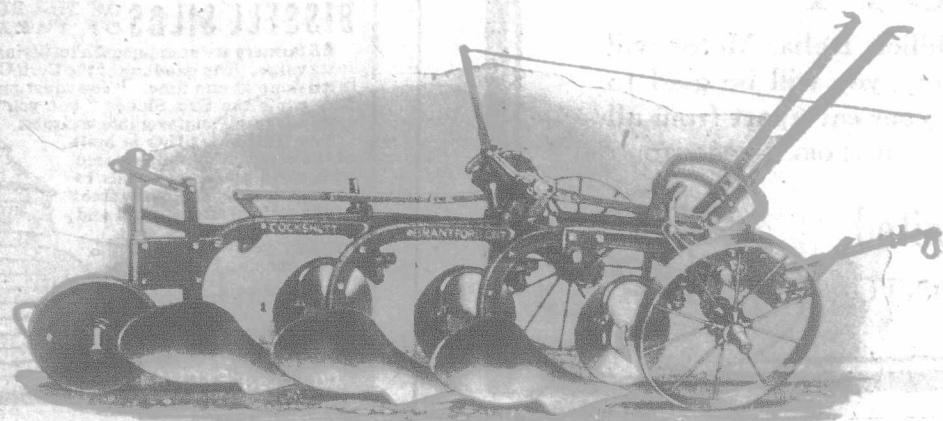
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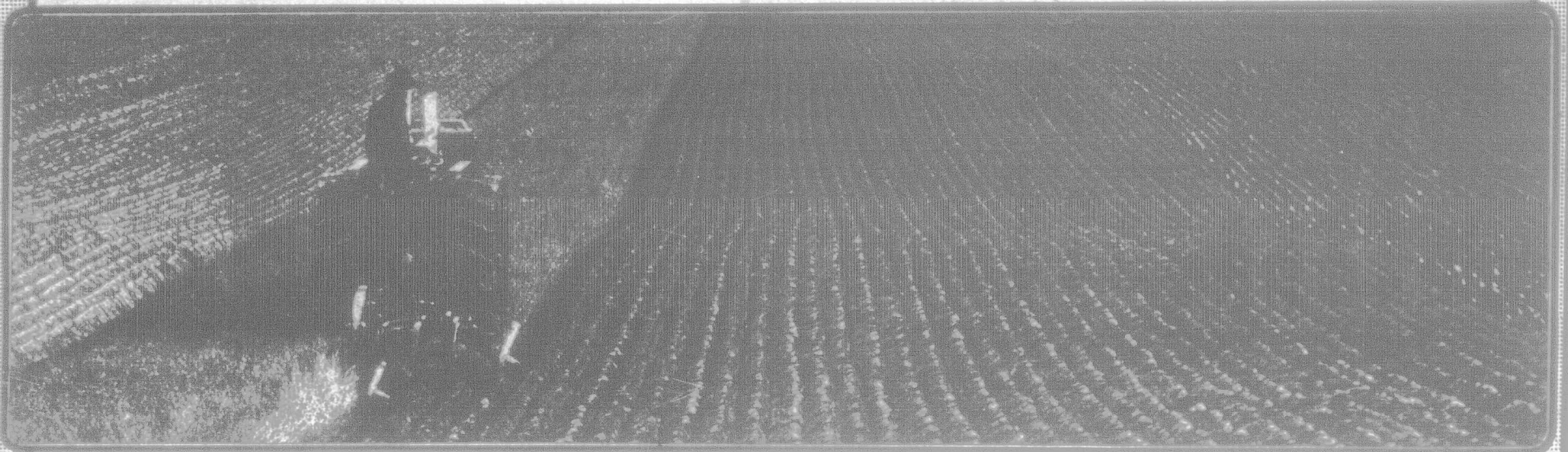
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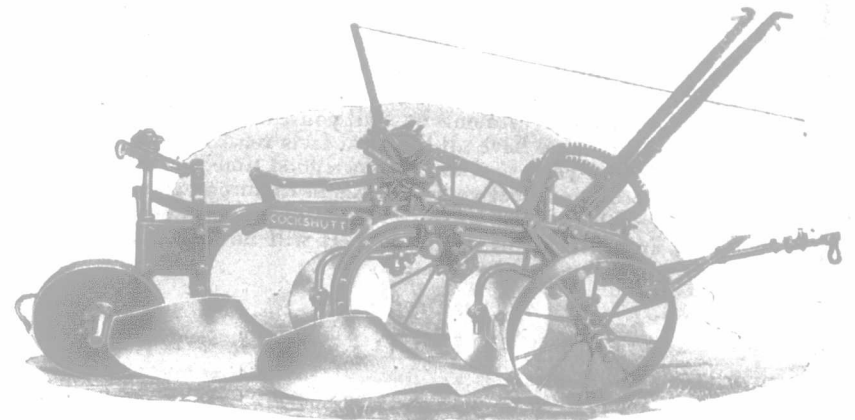
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